

2006

# The relationship between gender and elementary school students' perceptions of health and physical education in a coeducational setting.

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THE RELATIONSHIP BETWEEN GENDER AND ELEMENTARY SCHOOL  
STUDENTS' PERCEPTIONS OF HEALTH AND PHYSICAL EDUCATION IN A  
COEDUCATIONAL SETTING

by

Paul J. Naim

A Thesis

Submitted to the Faculty of Graduate Studies and Research  
through the Faculty of Education  
in Partial Fulfillment of the Requirements for  
the Degree of Master of Education at the  
University of Windsor

Windsor, Ontario, Canada

2006

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Direction du  
Patrimoine de l'édition

395 Wellington Street  
Ottawa ON K1A 0N4  
Canada

395, rue Wellington  
Ottawa ON K1A 0N4  
Canada

*Your file    Votre référence*

*ISBN: 978-0-494-17084-7*

*Our file    Notre référence*

*ISBN: 978-0-494-17084-7*

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## ABSTRACT

The purpose of this study was to investigate the relationship among attitudes and perceptions of boys and girls in grades 6-8 regarding Health and Physical Education (HPE) in a coeducational setting. An increase in obesity rates for adolescents and a decrease in their physical activity rates are alarming trends since they are likely to continue into adulthood.

A sample of 46 boys and 50 girls in grades 6-8 completed a mixed-methods questionnaire composed of 32 closed-ended and 6 open-ended questions. Boys and girls enjoyed participating in HPE activities 95.7% and 90% respectively, and described HPE class as healthy, active and fun. Both genders preferred team sports yet desired a wider range of activities. Students perceived male HPE teachers as more competent than females. Only 27% of boys and 25% of girls would prefer single-gender classes. HPE curriculum and instruction must be revised to encourage healthy life-long habits.

## ACKNOWLEDGEMENTS

I would like to take this opportunity to thank the many people who helped me throughout this study. First and foremost, I am forever grateful to the group of students I first worked with. You all inspired me to pursue this topic and played such an influential role in my academic life. I would also like to thank all the students who took part in this study. Your thoughts and concerns were heard and I appreciate your candour and honesty in your responses. I sincerely hope you all continue to participate in physical activities at school and after-school. I would also like to thank my principals who have assisted and supported me in numerous ways during this long process.

Thank you to my advisor, Dr. Daniel, for her patience and guidance in helping me through the thesis process. I appreciate your time and efforts. To all my other advisors, your time and input was valuable and I thank you for your assistance.

I am also grateful to have such wonderful friends who helped me stay on track and assisted me in too many ways to mention. I would also like to thank my family for their support throughout my academic pursuits, for believing in me, and for being there for me whenever I needed you.

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## CHAPTER I

### INTRODUCTION

#### A. General Statement of the Problem

Childhood obesity in Canadian children has increased rapidly and is showing no sign of slowing down. During the period of 1981 to 1996, obesity rates in boys and girls increased from 5% to 13.5% and 11.8% respectively (Tremblay & Willms, 2000). The growing popularity of instant foods with marginal nutritional benefits, computers, and television have made it easier to live a sedentary lifestyle. The difficulty in achieving a more physically active youth population will require a concerted effort by all members of our society. Fast food, which is not conducive to healthy living, is a part of our everyday lifestyle (Schlosser, 2002). Food items on the menu for children have little nutritional value and are conveniently available (Schwartz & Puhl, 2003). Children consume products containing too much sugar and fat if they are found in the home (Gable & Lutz, 2000). Obesity has been on the rise due, in part, to children's lack of physical activity (Grantham, 1998). The Ontario government has developed a new 'healthy schools' initiative titled "Daily Physical Activity in Schools" (2005) in response to these serious health concerns.

The goal of the new healthy schools initiative in Ontario is to provide all students "with 20 minutes of sustained moderate to vigorous physical activity every school day during instructional time." (Daily Physical Activity in Schools, 2005, p.4). This is a substantial change from the previous government's directives, which emphasized math and language arts at the expense of all other curriculum areas. The present day government believes that by making physical activity a regular part of the school day,

students will then recognize the importance being placed on living a healthy and active lifestyle. Teachers are empowered through this initiative by having the flexibility to choose the types of activities that will achieve the government's goal and will motivate their students to participate and be active. Daily physical activity is intended to help elementary students enhance their level of physical fitness, health and to improve their learning opportunities in other subject areas. The major requirements for daily physical activity outlined in the document focus around three essential points. First and foremost is the idea of 20 minutes of sustained moderate to vigorous physical activity daily. The second point intends to ensure that physical activity is scheduled during instructional time. The third point states that physical activity can take place in the classroom, outdoors or in the gymnasium. These conditions were established to ensure students receive physical activity, regardless of facilities available or due to a lack of time in the daily timetable. The healthy schools initiative was developed using teacher input and based on findings from several studies. However, schools should not be left alone to tackle this problem of physical inactivity. Parents too must address the nutritional needs and physical activity levels of their children.

Parents are expected to be positive role models (Anderssen & Wold, 1992; Behan, 2001) in living a healthy lifestyle by including nutritious foods and fun physical activities into the family's daily routine. Doctors recommend that parents develop healthy eating habits and provide more opportunities for children to lead a more physically active lifestyle (Heart and Stroke Foundation of Canada, 2004). Parents, educators, communities, and governments have a responsibility to guide young people towards living a much more balanced and healthy lifestyle (The Canadian Association for Health,

Physical Education, Recreation and Dance, 1997). All Canadians must act upon these serious and preventable health and physical activity issues in order to sustain a healthy and productive population. However, this is not the case. According to Health Canada physical activity statistics (2002), only 38% of girls and 48% of boys are believed to be sufficiently involved in physical activities. Adolescent statistics are even more alarming. Teenage adolescent girls and boys have a 30% and 40% participation rate, respectively, in physical activities that contain some physical and health benefits. This discrepancy among the sexes must be studied in order to address the 10% gap and increase participation in physical activities for all youth.

Canada is a country comprised of the most highly educated population in the world according to the Organization for Economic Co-operation and Development (as cited in Alphonso, 2003). However, this largely educated nation of knowledgeable men and women have done poorly when it comes to living a healthy and active lifestyle. Canadian youth are now facing a new set of health problems. Canadians are aware of the numerous benefits of physical education and healthy eating but have not sufficiently acted upon this wealth of information. Newspapers, magazines and television programs have been giving more exposure and information about the health problems young people are facing, such as heart disease and Type II diabetes. Frightening statements are being made regarding the serious nature of the present obesity trends. More parents may see their children die if obesity rates continue to rise (Galloway, 2005). This same study also found that, with teacher encouragement, students can increase the amount of physical activity they do.

Educators must stress the importance of health and physical education to boys and girls when they are in primary grades. McCracken (2001) believes physical education requires a shift from the present emphasis of teaching sport skills towards a lifetime fitness approach by including a wider variety of activities. Service (2000), who studied equity issues in the area of physical education, concluded that coeducational cooperative games should be used in place of coeducational competitive games. Activities enjoyed by boys and girls are more likely to lead to the development of positive attitudes towards lifelong physical activity. Female students have been critical of the present health and physical education program, suggesting that changes are necessary in order to keep their interest. Teachers need to emphasize the importance of maintaining a healthy lifestyle by modeling a wholesome and physically active lifestyle themselves (Anderssen & Wold, 1992; Wechsler, Devereaux, Davis & Collins, 2000).

Early in my teaching career, I began coaching boys' and girls' interscholastic teams such as soccer, volleyball and basketball. During our first volleyball season together, I noticed some differences in what the girls wanted to do at our practices and how they played during our home games. Practices required patience on my part as the girls, who ranged from grades 5 through 8, were of varying playing abilities. Constant encouragement was required to keep the girls from giving-up and to prevent the team from disbanding. This situation had not presented itself during boys' practices. Even more startling was how the girls played during our home games. Our first two home games were unimpressive as the girls displayed a lack of confidence in their team and did not demonstrate the skills learned during practice. After the second home game, I asked the girls if they could explain the poor home performances. When we played at other

schools, against the same teams we played at home, we were much more competitive. Two of the grade 8 girls explained that they felt uncomfortable playing in front of the boys from our school since they would tease them during the game and in class the next day. After informing the principal of the girls' concerns, we decided to allow only parents to spectate during the home games. This change brought about a change in confidence to the girls' volleyball team. They were much more aggressive and did not feel embarrassed when a bump went too high or if a serve hit the net. They knew the boys would not be able to taunt them if mistakes occurred during the game. The girls never lost their composure since and truly enjoyed playing the remainder of the volleyball season.

The following year, the same two grade 8 girls, who possessed a very high skill level in volleyball, were encouraged after visiting with me, to try out for their high school team. The two girls attended the first practice and were told, before practice started, that they, and all other grade 9 girls, had no chance to make the midget volleyball team because they were in grade 9. When these two girls visited again and shared their experience with me, I became very frustrated and irritated over the fact that these talented girls have been turned off from all interscholastic athletics at the secondary level because of one coach's policy. The inconsistency in expectations of teachers and coaches in the elementary and secondary level made me curious about what the students' believe awaits them in high school and what are some of the differences they perceive regarding physical activities and physical education. Furthermore, after reading about the gap in physical activity levels between boys and girls, and the decrease in the amount of physical activity during the transition years between elementary and secondary school, I

decided to research gender differences relating to physical activities and the effects of physical education.

The disturbing trend of decreasing levels of physical activity by students of both genders is alarming and there is a growing amount of research that explores the differences that exist between boys and girls as they get older. Numerous studies (Gibbons, Van Gyn, Higgins & Gaul, 2000; Gurian & Henley, 2001; Haygarth, 1999; Humbert, 1995; Lirgg, 1993; Luke & Sinclair, 1991; Olafson, 2002; Osbourne, Bauer & Sutliff, 2002; Schneider, Coutts & Starr, 1988; Treanor, Graber, Housner & Wiegand, 1998) involving gender equity in health and physical education have reported concerns by girls which may help explain why more boys than girls continue in physical education at the secondary level. In a Statistics Canada health report (Tremblay, Dahinten & Kohen, 2003), researchers discovered that as girls increased in age, they were more likely to rate their own health in a less favourable manner. Furthermore, the aforementioned study also discovered an increase in inactivity levels for boys and girls as they matured. However, the increase in inactivity was greater for girls (10%) compared to boys (4%) as they progressed from elementary school age to secondary school age. Gurian and Henley (2001) believe that students in middle school should be segregated into gender-separate groups and classes whenever possible. Would this concept increase male and female participation in physical activities?

#### B. Definition of Terms

Athletics: For the purpose of this study, athletics include all activities, all gender-segregated and coeducational teams and individual sports played at school.

Attitudes: A settled opinion or way of thinking (Oxford English Reference Dictionary, 1996).

Coeducation (coed): Males and females attending the same class together.

Equity: The right of all individuals to equal opportunity in, and equal access to, participation in activities which allow development of one's potential regardless of gender, age, motor ability, race, religion, or socio-economic level (Lyn-Harrison, 2002).

Gender Equity: "The principle and practice of fair and equitable allocation of resources and opportunities to both females and males." (Larkin & Baxter, 1993, p. 4)

Health and Physical Education (HPE): As defined by the Ontario Ministry of Education Curriculum, Grades 1-8 (1998):

- an understanding of the importance of physical fitness, health, and well-being and the factors that contribute to them;
- a personal commitment to daily vigorous physical activity and positive health behaviours;
- the basic movement skills they require to participate in physical activities throughout their lives.

The curriculum focuses on three knowledge areas:

- Healthy living (e.g., healthy eating)
- Fundamental movement skills (e.g., locomotion/traveling skills)
- Active participation (e.g., physical fitness and living skills)

Middle school students: For the purpose of this study, middle school students will include boys and girls from Grade 6, Grade 7, and Grade 8 ranging from ages 10 to 15.

The participants of this study will be attending elementary school.



Perception: An interpretation or impression based on one's understanding of something (Oxford English Reference Dictionary, 1996).

Physical activity: For the purpose of this study, physical activity means a significant increase in heart rate compared to the resting rate for a minimum duration of 20 consecutive minutes.

Sports: For the purpose of this study, sports and games will be synonymous and are interchangeable with physical activities.

### C. Review of Literature

The following literature review considers many of the influences which affect elementary students' level of involvement and enjoyment of Health and Physical Education by comparing the differences found between males and females. Students' self-confidence and perceptions of physical education, environmental factors, obesity, gender differences, single-gender and coeducational HPE classes, self-perceptions and the role of educators are discussed.

#### **Self-Confidence**

Past studies have suggested that females tended to lack self-confidence when competing against males in physical activities and sports (Stewart & Corbin, 1989). Girls lacking self-confidence in physical education activities required immediate, unambiguous feedback. A meta-analysis of various studies has shown the more masculine the activity was perceived, the greater the confidence difference between males and females (Lirgg, 1991). Edwards (1993) suggested some ways in which parents, teachers, coaches, and others can strengthen female students' self-confidence. These included displaying mutual respect, unconditional love, and positive encouragement. Mutual respect was to

be reinforced, not just between educators and students, but also among students.

Unconditional love for the student must be acknowledged in situations where the student is reprimanded. This important distinction was highlighted by Edwards (1993) as being essential. It must be understood by the student that the behaviour is disliked and not the student. Positive encouragement was determined to be exceedingly necessary with female students. The educator must be verbally proactive in order to give the female students a boost in self-confidence when they are first developing the necessary skills of new activities. Constant positive feedback and encouragement, as well as high expectations from the teacher, had played an important role in developing girls' self-confidence (Gurian & Henley, 2001). Students, especially females, need to be constantly reminded that new skills take time to develop. This positive reassurance may have prevented females from giving up so easily. Skill competencies, perceived by males and females, were believed to play an influential role when students were deciding whether or not to participate in physical activities in the future (Goudas, Dermitzaki & Bagiatis, 2001). Students with strong athletic skills, regardless of gender, were found to be more physically active than students with moderate or low ability and physical activity levels were detected to be highest when team games were played (Fairclough & Stratton, 2005).

### **Perceptions of Physical Education**

Studies involved in students' perceptions of coed and single-gender health and physical education (HPE) at the middle school level have similar findings. One of the most significant findings dealt with the kind of curriculum taught in HPE classes (Luke & Sinclair, 1991; Olafson, 2002; Stewart & Corbin, 1989). The type of curriculum these females were given was seen as a very significant factor when it came time to select

courses for the upcoming school year. Once females at the secondary level have fulfilled the single HPE requirement, many chose not to re-enroll. Kentel (2001) stated that sound pedagogy is a key factor if children are to develop and continue using the skills learned in physical education class as they continue into adulthood. Pedagogy must enrich and enthuse students if they are to be reasonably expected to continue enrolling in HPE classes. Past experiences by many female students suggested a more enriched experience, including a greater variety of physical activities, at the elementary level, factored into the enrolment decisions of adolescent females at the secondary level (Cavar, 2002; Humbert, 1995). Another secondary school study (Klomsten, Marsh & Skaalvik, 2005) uncovered a significant fact concerning perceptions and gender differences. Nearly all girls in the study were under the impression that some sports were more appropriate for girls than boys. Contrary to the girls' beliefs, 55% of the boys did not believe certain sports are more appropriate for one gender over another. This study's findings showed that it may be girls who have stronger stereotypical views regarding appropriate sports for each gender to participate in than boys. Stelzer, Ernest, Fenster and Langford (2004) learned in their study that boys and girls had favourable attitudes towards HPE but the males had stronger attitudes toward the subject than females. It is imperative that educators do everything necessary to create an HPE program which will help develop positive attitudes in males and especially females. One particular approach should include encouraging a sociable and fun atmosphere.

Social interactions among the female participants, at the middle school level, was the most identified preference given for single-gender physical education class (Lirgg, 1994; Treanor, Graber, Housner & Wiegand, 1998). Some of the reasons single-gender

classes were preferred by females included: interpersonal issues and the presence of the opposite gender made learning uncomfortable; the way females felt about their bodies; gender-discrimination; participation with males caused many females to be excluded from games; demeaning comments; harassment and ridicule heaped upon them by the males (Gibbons, Higgins, Gaul, & Van Gyn, 1999; Humbert, 1995; Hutchinson, 1995; Olafson, 2002; Osbourne, Bauer, & Sutliff, 2002). An Ontario study involving Grade 8 students (Klentrou, Hay & Plyley, 2003) revealed a significantly lower level of enjoyment in HPE by females compared to males. This study also uncovered a positive correlation between level of enjoyment of physical activities and level of physical fitness. The more a student enjoyed physical activities, the more likely the student would also be physically fit. In contrast, other studies showed that there were skilled females who did feel comfortable in a coed physical education environment and studies where male students in coed classes were significantly more confident of their skills than males in single-gender classes (Humbert, 1995; Lirgg, 1993; Treanor, Graber, Housner & Wiegand, 1998). Benefits for both genders in conducting coeducational physical education classes include learning to respect and accept each others' abilities as well as developing social relationships by participating together in various physical activities (Gibbons & Van Gyn, 1996). Participation in various extracurricular activities was positively associated with positive self-perceptions (Daley & Leahy, 2003).

### **Environmental Factors**

The Canadian Association for Health, Physical Education, Recreation and Dance (CAHPERD, 1997) argued it was much easier to establish healthy living habits during childhood. Schools, administrators, communities and governments at all levels can play

a major role by establishing policies encouraging students to develop healthy living habits. This same document noted that 35% of Canadians reported an inactive lifestyle. Wechsler et al. (2000) found intramural programs were more successful than interscholastic programs. Participation was higher because having fun was the goal, not competition. Australia took a proactive stand in this area and established a national policy on women and girls in sport because approximately one-third of the Australian adult population did not involve themselves in enough moderate physical activity to sustain any health benefits. The policy promoted health benefits and increased quality of life exhibited by increased physical activity (Haygarth, 2002).

In Canada, “physical activity is quickly becoming a disease of epidemic proportions within our technological society. The average Canadian child spends 36 hours sitting in school and 26 hours watching T.V each week.” (CAHPERD, 1997, p.1) Other related studies suggested that students who participated in organized sports outside of school, with family support, were significantly associated with living a more healthy and active lifestyle, which also led to enjoyment of HPE classes (Sallis, Prochaska, Taylor & Hill, 1999). A study by Attewell, Suazo-Garcia and Battle (2003) found an association between students who spent eight hours or more a week on their home computer had a higher body mass index. These students also spent less time playing sports or other physical activities and weighed, on average, 12 pounds more than students who did not use home computers. The likelihood of elementary and secondary school-aged students being overweight was positively correlated with time spent in front of the computer, television or electronic games (Shields, 2005). Tremblay, Inman and Willms (2000) found socioeconomic status (SES) associations with body mass index and

physical activity levels. The researchers sampled 5,146 grade 6 students in New Brunswick. Students' SES was positively related with physical activity levels. As the SES of a student increased, so did the amount of physical activity. Yet, SES proved to be negatively related to body mass index. As the SES of a student increased, their body mass index tended to be lower. While this study involving Canadian youth (Higgins, Gaul, Gibbons & Van Gyn, 2003) found males to be more physically active than females, the authors also noted gender differences were most significant between the ages 12-20 and physical activity decreased for males and females as they aged. Furthermore, their findings also indicated that physical activity was more likely to occur in families with a higher household income and where students had near perfect school attendance and were socially involved. However, physical activity levels were found to decrease when boys and girls were concerned about their weight or if they smoked. The more physically active the students were, the less likely they were to smoke.

Many environmental factors affecting students' health include their attitudes towards HPE and the attitudes of their family members, government policies, and the characteristics of the school, neighbourhood, and area businesses (Raphael, Anderson & McCall, 1999; Wechsler et al., 2000). Teachers, principals, parents, and governments can all be involved in nurturing youth in a healthy and active environment. Teachers can educate girls about their bodies and provide gender-specific support for female athletics (Gurian & Henley, 2001). Principals can engage the school community by encouraging gymnasium use, biking, and walking to and from school. School teams of both genders also must be treated equally, although this was not always the case (Vorkapich, 1997). Parents can participate in physical activities and should perform them as a family.

Gurian and Henley (2001) also suggested parents get involved by supporting their daughters when they are involved in extra-curricular activities and by volunteering at the school. Kulinna (2004) revealed grade 3 and grade 4 students' physical activities matched the physical activities of their parents 42% of the time. Furthermore, this study found girls listed a family member as their most popular role model compared to boys, who selected celebrity male athletes, and discovered aerobic activities were most preferred by girls while boys preferred team sports. The importance of role models should not be underestimated, especially for female students. Girls were found to have fewer role models involved in physical activity compared to boys (Garcia, Pender, Antonakos & Ronis, 1998). According to Bandura's Social Learning Theory (1977), human behaviours are learned and imitated through modeling. Bandura also found that television can be a source for children to model. Social learning theory states that people are more likely to imitate what they see if the activity is valued and if the person modeling the behaviour is respected and revered. This theory can be both positive and negative for parents and teachers especially. If students witness their parents or teachers smoking, this less-desirable behaviour may be followed. However, if students notice their parents or teachers eating healthy snacks and are physically active, these positive behaviours may be followed. Modeling is a very powerful tool that can be used to develop and maintain an appropriate healthy and active lifestyle.

In a study of 475 adolescents aged 13-15 in Estonia, Raudsepp and Viira (2000) discovered a positive association similar with findings in other studies. The participating students' amount of physical activity was positively associated with the amount of physical activity performed by the father, older brother and best friend. Garcia et al.,

(1998) found both boys and girls received less social support from friends and family to be physically active after the transition from elementary to junior high school.

Furthermore, parents should impose limits on the amount of television and video games their children play (CAHPERD, 1997). Yet social learning theory again states that television can be a source of modeling which, if used properly, can lead to a positive attitude towards healthy living. The types of programs watched can influence children's behaviours. Do the actors on the programs smoke or drink or exercise? Parents must be aware of the programs being watched by their children to prevent the wrong message from being modeled and should try to discuss which themes are appropriate and inappropriate. The media is a powerful influence on children where children will form concepts of gendered roles and behaviours associated with males and females (Bussey & Bandura, 2004). The Ontario provincial government will attempt to change the attitudes regarding physical activity levels and junk food. While some people see this food as harmless, the Ministry of Health for Ontario has begun implementing a plan to ban unhealthy foods from schools (Mackie, 2004). Positive messages need to be broadcast to students informing them of the benefits and importance of healthy and active living.

A unique study of a Nike commercial by White and Sheets (2001) explored seven statements in an attempt to encourage females to lead a more physically active lifestyle. The researchers concluded their study claiming evidence in support of all seven of the following statements. The commercial stated: If you let me play sports ...

1. I will like myself more.
2. I will have more self-confidence.
3. I will suffer less depression.



4. I will be 60% less likely to develop breast cancer.
5. I will be more likely to leave a man who beats me.
6. I will be less likely to get pregnant before I want to.
7. I will learn what it means to be strong.

While Nike undoubtedly has their own economic interest in mind, the positive claims made in favour of female participation in athletics were strong and proved that all aspects of the community, including business, embraced its role and responsibility to promote a healthy and active lifestyle for females. Nike understood the importance of this underdeveloped market of female athletics and pursued it through the power of advertising.

### **Obesity and Physical Education**

The latest Statistics Canada study (Shields, 2005) discovered 29% of adolescents aged 12 to 17 were overweight and 9% were obese. Schools must lead the way in changing the unhealthy environment students are presently facing. Canadian boys were found to be more overweight and obese than girls. About 15% of Canadian youth aged 11-16 were found to be overweight (preobese) and 5% were obese (Janssen, Katzmarzyk, Boyce, King & Pickett, 2004). These authors also found a low level of physical activity and a high level of television viewing among the youth who were deemed overweight/obese. Schools should limit the amount of advertising of junk food in schools and unhealthy food should not be served in school (Schwartz & Puhl, 2003). Obesity due to physical inactivity is preventable and is causing financial strains to health care systems in the developed world (Colditz, 1999). Schools in Nova Scotia that participated in a particular nutrition program had significantly lower rates of overweight and obese student

populations (Veugelers & Fitzgerald, 2005). Findings from this study also discovered a greater amount of fruit and vegetable consumption, healthier diets and a lower fat intake compared to students who are not a part of the Annapolis Valley Health Promoting Schools Project. A relationship between eating fruits and vegetables and excess weight was found by Shields (2005). Adolescents who consumed fruits and vegetables 5 or more times a day were considerably less likely to be overweight compared to those who ate fewer than 5 servings of fruits and vegetables.

Prevention of obesity must commence at an early age and be reinforced throughout a student's academic career, at home and through all types of media. Carrière (2003) and Shields (2005) both discovered a strong association between parent obesity and child obesity. Shields (2005) also found a relationship between level of education and obesity. Children, whose parents had only a high school diploma, were more likely to be overweight or obese than children whose parents had graduated from a postsecondary program. Shephard and Trudeau (2000) stated that the ultimate goal of HPE is long-term health. Their study showed that after 20 years, former students, especially females of Trois Rivières, Québec, who were in an experimental group with well-trained HPE instructors, as opposed to the regular classroom teacher, were involved in significantly more physical activity than those in the control group. O'Dea and Caputi (2001) revealed in their study that students from a low SES environment are two times more likely to become overweight than students from a high SES environment.

Teachers must ensure HPE is not given a low priority compared to other curriculum areas such as math and language arts. Cross-curricular integration of math and HPE, or science and HPE should be encouraged. Programs such as the Heart

Healthy Kids Toolbox, developed by the Heart and Stroke Foundation, will help ensure HPE is included regularly at school (Scaini, 2001). Students were also found to have a limited understanding of what physical activity really is (Trost, Morgan, Saunders, Felton, Ward & Pate, 2000).

### **Gender Differences**

Policies have taken into consideration another very important issue for females: gender equity. The Australian Sport Commission (1999) developed strategies to encourage and support females in all aspects of sport. First and foremost in the policy was the endorsement and promotion of gender equity. Young women require an environment where they feel respected, safe, supportive, and harassment-free (Humbert, 1995). Gender equity policies must be carried out by the educator, not just in the HPE area, but also in all facets of school life. This policy can positively impact all students and provide a supportive climate, can affect the types of sports selected, and the learning environment (Hutchinson, 1995). Teachers must be aware of their own behaviours exhibited towards girls. In the past, this included believing girls are incapable athletically and setting low expectations for them. Gender-fair teaching requires effective teacher behaviour, such as a class environment of respect and inclusive language. Some examples of phrases teachers should avoid include: You throw like a *girl/boy*, or that you are the best *man* for the job. Gender-fair phrases for these two examples are: You throw correctly/incorrectly, and you are the best person for the job (Lyn-Harrison, 2002). Effective class management, including gender-fair pedagogy, was believed to be a requirement in order to treat both genders equally. Establishing rules of conduct and

appropriate behaviour and language were some ways to deal with harassment (Gibbons, Susut & Fenton, 1999).

Past studies have suggested ways to extend the physical activity levels of females beyond the junior/intermediate level. Some qualitative studies have shown that, unlike males, females preferred a wide variety of physical activities such as personal fitness (e.g., aerobics), outdoor recreation activities such as canoeing, and opportunities to use community facilities (Gibbons et al., 1999). Males and females both agreed contact sports are better for males. Females stated a preference towards activities that are low-intensity and involve developing flexibility such as volleyball and gymnastics (Osbourne et al., 2002). Conversely, boys' preferences are more towards fitness and sport performance activities, according to the findings from Frömel, Formánková and Sallis (2002). Combining music with movement activities was suggested as another way to boost female interest in physical activities (Beveridge & Scruggs, 2000).

Other factors needing modification to increase female involvement in physical activity involved the level of enjoyment experienced (Gibbons et al., 1999; Luke & Sinclair, 1991; Sallis et al., 1999). If physical activities being taught were perceived as boring and loathsome, females would not be interested in HPE once it becomes an elective course at the secondary level. A more positive and rewarding experience at the elementary level would encourage more females to enroll in HPE as they moved on to the secondary level (Cavar, 2002). A more significant health section was also valued by females and was seen as influencing their decision to enroll in elective physical education (Gibbons et al., 1999).

Bussey and Bandura (as cited in Archer & Lloyd, 2002) believed children learn behaviours from both males and females but will only act out behaviours which are associated with their own sex. Of particular importance to the child was the perception that the behaviour is appropriate for their sex before it will be imitated. Therefore it is imperative that mothers and fathers model positive behaviours for their daughters and sons respectively. Social learning theory also states that the social environment will influence behaviours. If the child's friends, who will be of the same sex, enjoy playing games, they too will be more likely to participate in those activities. A child's circle of friends can be a positive or negative influence, depending on the behaviours exhibited.

### **Coeducational & Single-Gender HPE**

Although there was some consensus as to how to remedy the situation concerning the decrease in physical activity, there was no consensus about a preferred approach to physical education. Numerous studies have advocated for coeducational settings while others recommended gender-segregated physical education classes. Previous inquiries involving qualitative data supporting gender-segregated HPE concluded that an environment free of males is essential for girls to enjoy physical education (Humbert, 1995; Olafson, 2002). Social issues were also not found to be as much of a problem when segregated (Gibbons et al. 1999; Humbert, 1995; Osbourne et al., 2002). Derry and Phillips (2004) found girls spent nearly 50% more time learning skills or actively participating if they were in an all-girls HPE class compared to a coed HPE class. Research indicated females participating in coed classes did not suffer a significant difference in self-confidence when compared to males (Lirgg, 1993). Differences were

found between middle school students, who preferred same-sex classes, as opposed to high school students, who preferred coed classes.

Arguments for coeducational classes at the high-school level were given by Lirgg's (1994) findings, which suggested females should receive coed physical education at the secondary level and allow for a middle school single-gender environment. This was partly due to the many physical and emotional changes females experience during this stage in their lives. In this same study, females rated overall student involvement as greater in single-gender classes, not in coed classes. Females also demonstrated they lacked the self-confidence needed when competing with males. Conversely, another large study involved a questionnaire given to over 2000 Catholic students in southwestern Ontario, about their attitudes towards coed and single-gender education (Schneider, Coutts & Starr, 1988). Results emerged with coed schools showing more favourable attitudes about their academic competencies than those at single-gender schools.

Nevertheless, another study (Koca, Asçi & Demirhan, 2005), involving grade 9 students discovered 73% of the boys and 73% of the girls from coed schools preferred coed HPE. However, this study also found 75% of the girls and 65% of the boys in single-gender schools preferred coed HPE. Girls were found to benefit more from a moderate to vigorous amount of physical activity in coed HPE class than in single-gender HPE class while boys' level of physical activity was similar in either type of class (McKenzie, Prochaska, Sallis & LaMaster, 2004). Furthermore, these researchers also noted that the primary reason for the different levels of physical activity involved the fact that girls only classes provided more time for skill improvement and less time for play compared to coed classes. The level of intensity of the physical activity itself should not

be seen as the only variable to achieve in HPE. Skill acquisition is also important in order for the students to feel more competent in their abilities.

### **Self-Perceptions**

A study by Southall, Okely and Steele (2004), found overweight children perceived a lower level of competence and actually had a lower level of competence when performing physical activities. Teachers and parents need to treat this problem by promoting physically active time as opposed to sedentary time. Furthermore, 12 year-old females were less likely to have low self-esteem if they were physically active (Tremblay, Inman & Willms, 2000). However the study also found that SES was positively related to self-esteem. While schools have no control over the SES of its community, the ability to enhance students' self-esteem when performing physical activities is practicable. Park (2003) noted adolescent girls were more negative about their abilities than adolescent boys. Some of the consequences of poor self-concept for girls include depression, obesity, and poor self-perceived health. Low SES students, and girls in particular, need as much positive encouragement from friends, family, and teachers as possible. A British study by Carroll and Loumidis (2001) revealed that boys perceived HPE as more enjoyable than girls. These British girls also perceived themselves as being less skilled, which was believed to be a lead indicator regarding their decreased level of physical activity in or out of school. Moreover, Fredricks and Eccles (2005) revealed that boys have a greater perceived ability of themselves, much greater than girls, in playing sports. Children who perceive themselves as skillful and who also enjoy HPE were more likely to participate in physical activities outside school.

## **Educators**

Teachers were also studied in order to determine whether such issues as their gender abilities and class environment played a role in females' perceptions of physical education. Studies have suggested that teacher gender did not emerge as a significant issue (Gibbons, et al., 2000; Lirgg, 1994). Teachers played an influential role in pursuing increased involvement by males and females. Students perform physical activities differently yet many teachers separate their students based on gender, not skill level, consequently reinforcing gender differences (DeCorby, Halas, Dixon, Wintrup & Janzen, 2005). Educators must remove gender biases from physical activities, teach responsible social skills, avoid gender-biased language, and must be in agreement about the importance and worthiness of physical education (Beveridge & Scruggs, 2000; Gibbons, et al., 2000; Hutchinson, 1995). The health benefits attained by students receiving HPE must be acknowledged and valued consistently by all teachers in order to produce well-rounded young adults. Physical education should not be hindered by administrative decisions regarding timetable slots (Gibbons, et al., 1999). Teachers need to be aware that moderate to vigorous physical activity improves skill performance in curriculum areas such as math and reading (Cavar, 2002).

Schools must also do a better job encouraging more females to coach (Haygarth, 1999). Having a female coach would strengthen the image of female involvement in sports. Yet many female teachers have felt uncomfortable teaching and coaching athletics (Vorkapich, 1997). One suggestion given was to provide HPE workshops for teachers and coaches (Mills, 2005). This would provide the necessary knowledge and skills and promote confidence in the teachers who, at first, would have felt uncomfortable



being involved in an unfamiliar sport. Children are believed to classify each gender as they attend school in their formative years (Bussey & Bandura, 1999). Students are more likely to see many female teachers in the elementary school and will associate teaching as a more female profession. However, it is believed that this link is more difficult for young students if they see males and females teaching together in the early elementary years. If coaching teams were carried out by both a male and a female for each team, students will have a more difficult time determining their gender's role. It is very important to have female and male teachers in the elementary schools that have the necessary skills and are willing to work together in order to model appropriate gender-roles, which are that males and females can both be associated with physical activities. A Manitoba study (DeCorby et al., 2005) discovered positive attitudes regarding HPE by the students but also noted two main factors which made it difficult for teachers to deliver a quality program. One point concerned the lack of training and knowledge elementary teachers possessed while the second point involved teachers' lack of planning and problems with the facility. Furthermore, this study's authors concluded that a quality program should focus on teaching basic fundamental skills which can be built upon as the students' progress through the grades. Delivery of HPE curriculum in this manner will help children experience success in the skills learned but it can only occur if teachers' lack of knowledge is addressed.

Health and physical education is still a required curriculum subject at the elementary level and schools have played an important role in developing healthy and active students. Schools are expected to develop inclusive HPE programs, scheduled on

a daily basis, and encourage active participation by all students (Ontario Ministry of Education, 1998).

#### D. Research Question and Hypothesis

Research Question: Is there a statistically significant relationship between gender and elementary school students' perceptions of Health and Physical Education in a coeducational setting?

Hypothesis: There will be no statistically significant relationship between gender and elementary school students' perceptions of Health and Physical Education in a coeducational setting.

#### E. Significance of the Study

The main objective of this study was to investigate the relationship among attitudes and self-perceptions of males and females regarding the Ontario Health and Physical Education curriculum. The types of activities males and females enjoy were revealed. The information gathered can help create an improved health and physical education program and more physically fit and health conscious youth, equipped with the knowledge and habits that will continue with them throughout their lifetime. Furthermore, this study can raise awareness regarding the differences among males and females with the hope of increasing the participation rate for all youth, especially for girls.

This study is able to provide useful information to educators at all levels: principals, parents, coaches, and administrators. Much of the reviewed literature discussed the negative experiences girls had concerning HPE. Results from this study should raise parents' awareness of the importance of modeling healthy behaviours and

understanding of the health implications by not living an active lifestyle. Parents, according to the Ontario Ministry of Education Physical Education Curriculum Guidelines (p.3, 1998) are to “promote healthy active living through their own habits and practices. They should also support healthy eating and take responsibility for developing their children’s self-esteem.” Teachers must also model healthy behaviour. Principals must assume the responsibility of ensuring that gender equity is being heeded and that the school is pursuing an active and healthy directive. This can be demonstrated by having schools incorporate this feature into their mission statement.

An understanding of the perceptions that boys and girls have about health and physical education is useful to elementary school teachers. Teachers can be more aware of the students’ concerns and thus could make changes in the way the health and physical education program is carried out. Parents can also take note of the findings and determine the best ways to keep their children physically active and the types of activities they enjoy.

This study will contribute to the literature for decision-making in Ontario regarding the present HPE program. Much of the literature available has dealt with students already in secondary school, while this study focused on students making the transition from elementary to secondary school. The results of this study may help school boards and the Ministry of Education continue to research the lack of interest in physical activity in students and make changes to the present HPE curriculum. Any changes made should have the ultimate goal of stimulating today’s students to become active for a lifetime. As a teacher concerned with the soaring level of inactivity among

students, I feel that it is necessary to adapt the curriculum to meet the students' needs, as opposed to having the students adapt to meet the curriculum requirements.

## CHAPTER II

### DESIGN AND METHODOLOGY

The main objective of this mixed methods study was to investigate the relationship among attitudes and self-perceptions of boys and girls regarding the Ontario Health and Physical Education curriculum experienced in a coed setting. The types of activities boys and girls enjoy doing, perceptions of HPE and of their teachers were revealed.

#### A. Subjects

For the purpose of this study, the sample population included boys and girls attending Catholic elementary schools in an urban, southwestern Ontario setting. Three different elementary schools, all within 2 kilometres of each other, were selected and 175 consent forms were distributed. Parent/Guardian consent forms were signed and returned by 55% of the students. The sample consisted of 96 participating students who returned a signed parent/guardian consent form, 46 males and 50 females, in grades 6, 7 and 8. The population consisted of seven grade 6 girls and ten grade 6 boys, twenty-six grade 7 girls and twenty grade 7 boys, and seventeen grade 8 girls and sixteen grade 8 boys (see Table 1). The majority of students sampled ranged in age from 11-13 with only one student aged 10 and one aged 14.

#### B. Instrumentation

A survey instrument, created by Sullivan (2003), was used in order to meet some of the needs of this study. Sullivan designed the instrument, tested, revised and finalized it. It was approved by the review board at East Tennessee State University for a

dissertation project. However, for the purpose of this study some changes were made. Three questions regarding gym clothes and one regarding the physical education teacher have been omitted as they were unrelated to the study at hand. Other changes made to the original questionnaire included reducing the number of choices in the Likert scale from five to three. The three choices students could now choose from were: agree, undecided, disagree. Originally the choices were: agree, somewhat agree, undecided, somewhat disagree, disagree. How strongly the students agreed or disagreed was less important to this study than whether the student simply agreed or disagreed with the statement, hence the reduction in choices from 5 to 3. Furthermore, eight questions were added to the instrument in order to receive qualitative feedback regarding the HPE program. The questionnaire will attempt to reveal if relationships among the boys and girls exist between the level of participation, preferences towards coed or single-gender HPE, perceptions and preferences of HPE and of their teachers, and intentions to enroll in HPE at the secondary level. This questionnaire is divided into four sections (see Appendix A).

The first section asks the students to fill in simple demographic data such as their grade and age. The second section asks the students to select the most appropriate level of participation in HPE and the gender of their HPE teacher. The third section contains 29 statements where students will circle the most appropriate response. An example from this section appears as follows:

“I believe girls have an equal opportunity with boys to participate in class activities.

Agree

Undecided

Disagree”

The final section contains six short answer questions followed by two multiple choice questions, which were developed by the researcher. The information received from this section will provide qualitative information regarding preferences for either coed or single-gender HPE, and likes and dislikes towards physical activities and HPE. The following open-ended questions were asked:

- What physical activities do you like the most?
- What physical activities do you dislike the most?
- What do you like about Health and Physical Education class?
- What do you dislike the most about Health and Physical Education class?
- If you could make changes to the Health and Physical Education program at your school, what would they be?
- What do you think would be different if your Health and Physical Education classes were not coed?

The researcher administered the survey following a standardized procedure. This ensured consistency in the explanation of the survey for each and every class. The survey was returned to the researcher anonymously and was matched with the signed parent/guardian consent form. Records were made regarding the number of participants per school and class so as to provide relevant information to the classroom teacher, who was present in the classroom while the students completed the questionnaire.

The validity and reliability of the instrument was conducted by Sullivan (2003). The instrument was piloted and deemed to be reliable and valid for Sullivan's dissertation study concerning girls' perceptions toward coed HPE. The questionnaire was modified

for this study to accommodate boys and included open-ended questions as well as two multiple choice questions involving students' plans for HPE at the high school level. Only 4 questions had to be modified for boys, question number 2, 3, 18 and 22. An example of one of the contrasting questions follows. Question 3 for the girls asked: "I would prefer having physical education with girls only? Agree, Undecided, Disagree." Question 3 for the boys asked: "I would prefer having physical education with boys only? Agree, Undecided, Disagree."

Permission from Sullivan was sought once the Faculty of Education approved the study but was unsuccessful (see Appendix B). This study was approved by the Research Ethics Board at the University of Windsor (see Appendix C).

### C. Design and Procedures

This correlational research project involved two groups (males and females) and is intended to heighten our understanding of the different types of perceptions which exist in the area of HPE. Subsequent to receiving approval from the University of Windsor Research Ethics Board, permission was sought and received from: the school board (see Appendix D), elementary school principals (see Appendix E), and classroom teachers (see Appendix F). The parent/guardian consent form was then delivered to the participating classroom teachers and approximately two weeks were given for students to return the signed forms to their teacher. This study took place during the fall season, 2005. The procedures for conducting this study were as follows:

1. Parents/Guardians (see Appendix G) have signed the consent forms granting parental/guardian permission and a willingness to participate by the student. These forms



were returned to the classroom teacher and collected by the researcher at the time the survey was administered.

2. The researcher administered the questionnaire in the students' classroom and answered any and all questions the students may have had before the student assent forms (see Appendix H) and questionnaires were distributed. The student assent form was read aloud by the researcher before students began to fill in the questionnaire, followed by a brief explanation regarding the format and subject-matter of the survey. Students were made aware that they could withdraw their participation at any time from the study and that all information will remain confidential. Pencils and erasers were provided for all students. The classroom teacher and researcher circulated around the classroom to assist the students with any questions or clarifications they required.

3. The study was conducted in a classroom setting during regular school hours, with classroom teacher supervision. Approximately 30 minutes were required to go over instructions and administer the questionnaire.

There were no known risks involved by participating in this study. No remuneration for participation in this study was given to students, teachers or principals. It was strictly voluntary. Any individual information wishing to be obtained in connection to this study, where a student could be identified, will remain confidential and will not be disclosed unless written consent is provided by the parent/guardian. Data received from the questionnaire shall remain secured for three years and will be destroyed after that time. No parent, guardian or student exercised the option of removing their data from the study.

Benefits of this study include determining whether Health and Physical Education at the intermediate level should be taught in a coed setting or a gender-segregated setting. The perceptions acknowledged by the participants are meant to bring awareness to the importance of male and female involvement in maintaining a healthy lifestyle by instilling positive habits by the time students' graduate from high school. Potential changes in the way the curriculum is delivered to the students may also benefit males and females in the long-term.

### **Mixed Methods**

A mixed methods design was selected for this project as the qualitative data (open-ended questions) will corroborate findings from the quantitative data (closed-ended questions). Creswell (2003) stated that a mixed methods approach is a practical way "to better understand a research problem by conveying (or triangulating) both broad numeric trends from quantitative research and the detail of qualitative research." (p. 100).

Statistical and text analysis were used in this study. The statistical analysis was tested using SPSS (12.0) while the text analysis was examined using an open-coding procedure. The open-coding procedure entailed reading all the findings from the open-ended questions and organizing the ideas that were repeated using the same or similar words which expressed equivalent concepts. The sorted information was then grouped into common themes which were then quantified.

The mixed methods approach followed is known as the 'Concurrent Triangulation Strategy', which uses two different methods of research in a single study at the same time (Creswell, 2003). The concurrent triangulation strategy provided this research project with qualitative information which validated findings from the quantitative results. The

greatest benefit in following a mixed methods approach for this study was that a more extensive perspective would be produced. The challenges with mixed methods for this project were that it required more time to analyze the answers from the open-ended questions, deciphering illegible responses, and sorting the qualitative and quantitative data into common themes.

All data for this study was gathered concurrently. The research questionnaire was integrated; open-ended questions followed closed-ended questions. However, a priority was given to the quantitative data as the open-ended questions were meant to allow the students to voice their concerns regarding physical activities and HPE in their own words. The results from this study will show the quantitative findings were emphasized while the less-dominant qualitative data was used to corroborate the results.

#### D. Data Analysis

The researcher opted for a mixed methods approach, which provided important qualitative information that enriched the quantitative data. Chi-Square tests were applied to the ordinal data received from the three-point Likert scale. Statistical Package for the Social Sciences 12.0 (SPSS) was used to classify and interpret the quantitative results. The short-answer questions were analyzed following an open-coding procedure. This required the researcher to analyze the responses and sort the information into categories. Patterns and themes were identified and a frequency count of recurring words was performed.

Chi-Square tests provided the statistical analysis in order to determine whether a significant relationship existed between gender and students' perceptions for all closed-ended questions. The study involved two independent groups, boys and girls, being

measured once. The information sought was attitudinal. The type of data collected was ordinal in nature due to the ranking of information the students provided.

#### E. Limitations and Delimitations

##### **Limitations**

This study was limited by several key factors. There may be other characteristics which explain the relationships in the findings. Socioeconomic levels are a factor that can influence the results which were not studied. The location in the school where the data was collected may be seen as a threat to this study since there was no guarantee the survey will be administered in a gender-neutral, well-lit and well-ventilated classroom. A recent positive or negative HPE or interscholastic experience may have influenced the responses by some students. Other limitations that may have affected the outcome of the study include data-collector characteristics, data collector bias, and the withdrawal rate. Characteristics such as gender, age, and ethnicity may have skewed the participants' responses. Biases of the data collector may have been present if the collector was hoping for a specified result and demonstrated this through intonation and examples cited. Voluntary withdrawals did not present itself as a serious limitation since no student dropped-out of the study.

##### **Delimitations**

The sample of 96 students, 46 boys and 50 girls, was limited to the students enrolled at the 3 elementary schools with parent/guardian permission and signed the student assent form. Size and proximity of the schools are other delimitations. Reliability of coding open-ended questions and the limited-type of responses from the closed-ended questions restricted personal answers.

## CHAPTER III

### RESULTS

Health and Physical Education provides students with an opportunity to simultaneously educate and develop the body and mind. Gender differences encompassing the HPE curriculum will be revealed from a sample of 96 students from 3 southwestern Ontario schools, 46 boys and 50 girls (see Table 1). Consent forms were distributed to 175 students and 96 were returned with parental/guardian consent to participate in the study. The questionnaires were completed in the students' classrooms and required approximately 30 minutes. The researcher and classroom teacher were both present to assist the students when needed.

**Table 1 – Demographics of Sample Population**

<b>Grade</b>	<b>Boys</b>	<b>Girls</b>	<b>Total/Grade</b>
<b>6</b>	10	7	17
<b>7</b>	20	26	46
<b>8</b>	16	17	33
<b>Total</b>	<b>46</b>	<b>50</b>	<b>96</b>

This questionnaire incorporated a mixed methods approach to collect quantitative and qualitative data regarding gender differences (see Appendix A). The major themes uncovered from the questionnaire are grouped as follows: types of physical activities each gender likes and dislikes, attitudes encompassing HPE, students' suggestions to improve the HPE program, students' perceptions of their teachers and towards single-gender HPE.

### Physical Activities Liked and Disliked

*"I like games that make you run and do fun things all around the gym – so that you feel you are getting exercise. I also like playing sports in class when everyone is involved."* - grade 8 girl.

The theme both genders and all grades overwhelmingly communicated involved the concept of team sports. Moreover, 91% of boys and 74% of girls agreed with the statement "I enjoy playing team games (basketball, volleyball, soccer, etc.) with boys." Only 4% of boys and 10% of girls disagreed with the statement while the remaining 4% of boys and 16% of girls were undecided (see Table 2). Students were also asked if they enjoyed playing *team* games with girls. Boys agreed 63% with the statement while 86% of girls agreed. A greater number of boys than girls were undecided, 24% compared to 6% respectively, while 13% of boys and 8% of girls disagreed.

**Table 2 – Enjoy Team Games with Boys/Girls**

<b>Enjoy Playing Team Games with <i>Boys</i> (%)</b>				
<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>
Male	91.3	4.3	4.3	100
Female	74	16	10	100
<b>Enjoy Playing Team Games with <i>Girls</i> (%)</b>				
Male	63	24	13	100
Female	86	6	8	100

Students were asked whether they enjoyed playing *individual* sports (e.g., tennis) with other boys, just 67% of boys and 54% of girls agreed. The remainder of the boys

surveyed either disagreed (15.2%) or were undecided (17.4%). Fewer girls disagreed (12.5%) while more girls were undecided (33.3%) (see Table 3). Yet when asked if *individual* sports with girls are enjoyable to play, only 63% of the boys and 76% of the girls agreed. A significant difference was found between the boys and girls. Chi-Square test results showed the results of this question to be significant at a level  $p = .002$ ,  $\chi^2 = 12.622$ . Playing *individual* sports with girls was disliked by 26% of boys and only 2% of girls. Fewer boys than girls reported they were undecided, 10.9% compared to 22% respectively.

**Table 3 – Enjoy Individual Games with Boys/Girls**

<b>Enjoy Playing Individual Games with <i>Boys</i> (%)</b>				
<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>
Male	67.4	17.4	15.2	100
Female	54.2	33.3	12.5	100
<b>Enjoy Playing Individual Games with <i>Girls</i> (%)</b>				
Male	63	10.9	26.1	100
Female	76	22	2	100

Pearson Chi-Square = 12.622  
p = .002

Other gender differences materialized in the types of physical activities named. Grade 8 students revealed a wide variety of answers. While 11 grade 8 girls specifically noted volleyball as their most liked physical activity, only 3 grade 8 boys wrote down the same answer. Grade 7 boys and girls also wrote similar responses as the grade 8 students regarding most their liked physical activity. For the grade 7 girls, volleyball was again the overwhelming favourite physical activity with 17 girls specifically naming volleyball

as their most liked activity. Once more, only 3 grade 7 boys noted volleyball. Boys in grades 7 and 8 recorded basketball as their most liked physical activity (9 and 7 times respectively). See Table 4 for a breakdown between age and gender regarding volleyball and basketball. Notwithstanding, grade 7 and 8 boys most preferred physical activity to play during gym class was dodgeball (11 and 9 times respectively).

**Table 4 – Popular Physical Activities Reported**

<i>Volleyball</i>			<i>Basketball</i>		
Boys	Girls	# of students/grade	Boys	Girls	
		Boys   Grade   Girls			
3	11	16   8   17	7	10	
3	17	20   7   26	9	8	
3	3	10   6   7	5	1	
9	31	Total Frequency	21	19	
19.6%	62%	Total Percent	45.7%	38%	

Grade 7 and 8 girls wrote basketball 8 and 10 times respectively. Basketball was the third most popular physical activity for grade 7 girls, after soccer (15 responses). Grade 8 girls wrote soccer 8 times making it their third most liked physical activity. Despite a small sample size, grade 6 girls also chose volleyball as their most liked sport 3 times while 5 boys specified basketball and soccer (see Table 5).

Individual activities, such as swimming and biking, were mentioned 7 and 4 times, all by girls, respectively. Out of 46 boys, swimming appeared only once and hiking twice. Individual sports were less popular than any team physical activities. “I



*like the games were you can run when you want and not when you are being told by someone.*” While this grade 8 boy did mention running as being an important factor in physical activities, running on its own was not found to be a very popular sport with the students.

**Table 5 – Preferred Physical Activities, by Gender**

<i>Boys</i>			<i>Girls</i>		
Activity	Total	Percent	Activity	Total	Percent
	Frequency	(%)		Frequency	(%)
Dodgeball/ King's Court	26	56 %	Volleyball	31	62 %
Basketball	21	45.7	Soccer	24	48
Soccer	15	32.6	Basketball	19	38
Volleyball	9	19.6	Dodgeball/ King's Court	10	20
Hockey	6	13	Badminton	7	14
Running	5	10.9	Swimming	7	14
Badminton	2	4.3	Running	4	8
Biking	2	4.3	Biking	4	8
Swimming	1	2.2	Hockey	3	6

Although most students elected to simply name sports and games they disliked, some students voiced their concerns regarding the variety of activities, playing with the opposite gender, or playing with classmates who don't pass the ball. One grade 6 girl

wrote this very engaging comment: *"The physical activities I dislike the most are suicides, and like I already said, we should mix it up a bit. We always play like soccer, basketball it gets sort of tiring. That's making me dislike gym more and more."* She was not alone in voicing her opinion about the lack of alternatives to the typical assortment of physical activities presented such as soccer and basketball.

Boys and girls were asked: "What physical activities do you dislike the most?" Table 6 shows that running was reported cumulatively by 24 students, 10 boys (22%) and 14 girls (28%). Despite this overwhelmingly unpopular physical activity, some students did mention their preference for activities that require movement. *"I dislike the ones where there no fun and no moving to it. The ones where you seat around."* – grade 8 boy. Another grade 8 boy stated his aversion towards dance as a physical activity, which he dislikes the most. *"Dance because in phys. ed. your suppost to be playing sports and dance isn't really a sport."* Dance was reported 5 times (11%) by the boys (see Table 6).

The Ontario HPE curriculum (1998), under the Active Participation requirements, calls for students to set goals and formulate a plan to achieve their goals. However, some students, particularly this grade 8 girl, did not enjoy the pressure of competing, whether it was against the clock or other classmates: *"Where I am getting timed or judged when people are sitting and not getting involved with me."* Three grade 8 girls (18% of grade 8 girls) specifically mentioned competition as something they disliked the most. Boys did not express an objection to competition. Seven grade 8 girls (41% of grade 8 girls) also disliked some fitness activities such as push ups and sit ups. Only one grade 8 boy had the same aversion towards these types of fitness activities.

**Table 6 – Physical Activities Disliked**

<b>BOYS</b>			<b>GIRLS</b>		
<b>Activity</b>	<b>Total</b>	<b>Percent</b>	<b>Activity</b>	<b>Total</b>	<b>Percent</b>
	<b>Frequency</b>	<b>(%)</b>		<b>Frequency</b>	<b>(%)</b>
Volleyball	11	23.9	Running	14	28
Running	10	21.7	Basketball	13	26
Basketball	6	13	Nothing	10	20
Nothing	6	13	Fitness	7	14
Dance	5	10.9	Volleyball	7	14
Fitness	3	6.5	Soccer	5	10
Soccer	1	2.2	Competition	3	6
Dodgeball	1	2.2	Dodgeball	3	6

Gender differences appeared to be more pronounced in the younger grades.

Hormones may play a role in these differences as the students get older. A grade 7 girl wrote: *"I dislike playing physical activities (eg. dodgeball, volleyball) with a coed team of boys and girls."* Eight grade 7 boys responded with volleyball as the physical activity they dislike the most, while 8 grade 7 girls named basketball as their least preferred physical activity. Once again, running was found to be disliked by 5 girls and 2 boys in grade 7. Curiously, 3 boys in grade 8 and 2 boys in grade 7 stated there were no physical activities they disliked. Likewise 3 grade 8 girls and 5 grade 7 girls found no activities they disliked (see Table 6). Boys and girls were asked if they believed the activities taught in HPE are primarily for boys or for girls. Both genders strongly believed the

HPE classes were not geared toward a specific gender. The entire sample population disagreed 83% and 90% that HPE is primarily for boys or for girls respectively.

### **Attitudes Encompassing HPE**

*"I like playing sports, always moving and getting rid of all that extra energy."*

- grade 8 boy.

*"I like that we get active and exercise because it keeps us healthy and we get to have fun most of the time."* - grade 8 girl.

The idea that HPE is 'fun' and provides an opportunity for students to be 'active' and 'healthy', which was expressed by this grade 8 girl, were the most prevalent themes found, regardless of age or gender. Eight of sixteen grade 8 boys used the word 'fun' as what they liked about HPE in statements such as *"Have fun with your friend and get in shape."*

**Table 7 – What do you like about HPE class?**

<b>BOYS</b>			<b>GIRLS</b>		
<b>Popular</b>	<b>Total</b>	<b>Percent</b>	<b>Popular</b>	<b>Total</b>	<b>Percent</b>
<b>Themes</b>	<b>Frequency</b>	<b>(%)</b>	<b>Themes</b>	<b>Frequency</b>	<b>(%)</b>
Being Active/	18	39.1	Being Active/	28	56
Healthy			Healthy		
Fun	14	30.4	Fun	25	50
Play sports	10	21.7	Social	9	18
Break from	6	13	Play sports	8	16
Seatwork			Break from	3	6
			Seatwork		

Table 7 shows a summary of the most popular themes found in response to the question: “What do you like about Health and Physical Education class?” Common themes emerged in their responses with words such as ‘active’ and ‘healthy’ appearing in 39.1% of the boys’ comments and 56% of the girls’ responses. The next most popular theme found was about ‘fun’, which was noted by 30.4% of the boys and 50% of the girls.

Other similarities and differences to emerge from the grade 8 students stressed that HPE was a ‘break from school work’ (4 boys, 3 girls) and that it is ‘healthy for you in achieving physical fitness’ (4 boys, 11 girls). However, only one grade 8 boy mentioned the social aspect of HPE while 4 girls referred to it. Do girls prefer the social part of HPE more than boys? When asked if they believe physical education is a time to socialize with their friends, 56.5% of boys and 58% of girls disagreed while only 13% of boys and 14% of girls agreed that HPE is a time to socialize. The remaining 30% of boys and 28% of girls were undecided. Chi-Square analysis was used and no statistically significant difference was found. Once again the issue of offering different activities in HPE was raised by this grade 8 girl: *“I like when things are different. I do not like the same thing in class every week. I like actually feeling a workout, while working with other people.”*

The grade 7 boys and girls expressed that HPE is ‘fun’ 4 and 13 times respectively. Popular themes that emerged from the boys’ responses (9 times) focused on ‘being active’ or ‘healthy’. One grade 7 boy expressed his thoughts about HPE in great detail: *“The thing I like about Health and Physical Education class is that it’s fun, I get active, and that it gives me more hand eye coordination and it also gives me health,*

*making my heart beat faster and increasing my lung capacity.*” Fifteen girls liked the benefits of being healthy and active. Once again, three grade 7 girls mentioned the social aspect of HPE as something they enjoy while no boys made this attribute known. Similar to the grade 8 students, 3 girls and 2 boys noted that what is liked about HPE is that ‘it’s a break from homework.’ *“I like that I can learn about how to stay fit with foods and stay fit with exercising in gym class. I get to play with friends and it’s fun.”* The preceding comment by a grade 6 boy named many of the positive themes that have been revealed by the grade 7 and grade 8 students. Students also raised many concerns they have with HPE.

In addition to HPE being noted as ‘fun’ for boys, their level of participation in HPE was found to be stronger than with girls. Males selected the participation rate ‘All of the time’ 81% compared to 71% of females. Under the category ‘Most of the time’ 19% of males and 27% of females selected this participation rate. Only one female selected ‘Sometimes’ and no student selected ‘None of the time’ (see Table 8).

When asked if they enjoy participating in activities taught during HPE, nearly everyone agreed (96% of the boys and 90% of the girls). Furthermore 80% of boys and 92% of girls believed they had an equal opportunity to participate in HPE activities (see Table 9). However, only 60% of girls and 59% of boys enjoyed having HPE class with the opposite gender. Of importance was the fact that 12% of girls and 22% of boys did not enjoy having HPE class with the opposite gender. The remaining 28% of females and 20% of males were undecided (see Table 9).

**Table 8 – Self-Assessed Level of Participation in HPE (%)**

<b>Gender</b>	<b>All of the Time</b>	<b>Most of the Time</b>	<b>Sometimes</b>	<b>None of the Time</b>
Male	81	19	0	0
Female	71	27	2	0

**Table 9 - Enjoy Participating in HPE Activities, Enjoy Participating in HPE with Boys/Girls, Equal Opportunity to Participate**

**Enjoy Participating in HPE Activities (%)**

<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>
Male	95.7	4.3	0	100
Female	90	8	2	100

**Enjoy Participating in HPE with *Boys* (%)**

Male	28.9	26.7	44.4	100
Female	24	24	52	100

**Enjoy Participating in HPE with *Girls* (%)**

Male	58.7	19.6	21.7	100
Female	60	28	12	100

**Equal Opportunity for *Boys & Girls* to**

**Participate in HPE activities (%)**

Male	80.4	17.4	2.2	100
Female	92	6	2	100

Several themes emerged from the responses regarding what is disliked about HPE (see Table 10). While running proved to be the least popular theme to emerge (19.6% of boys and 20% of girls), the lack of choice in selecting the activities played proved to be high on the minds of these students. Boys and girls stated that a lack of choice was a problem for 13% and 14% respectively. The grade 8 boys and girls disliked running the most (5 and 7 times respectively). One boy expressed his negative view towards running by stating: *"I don't like running laps because we should get more time to get to the games."* A grade 8 girl had a different reason to dislike running: *"Competing in running or exercises. I like doing it, just not the competition."*

Boys and girls were asked if they believed boys place strong emphasis on winning physical education activities. Table 11 shows that 76.1% of boys and 76% of girls agreed with the statement. Boys and girls disagreed 13% and 12% while 10.9% and 12% were undecided, respectively. When the sample was asked if they believe girls place a strong emphasis on winning physical education activities, only 23.9% of boys and 24% of girls agreed while 47.8% of boys and 50% of girls were undecided. Disagreeing with this statement were 28.3% of boys and 26% of girls. Chi-Square analysis found no statistically significant difference for either question between the genders.

Another theme to emerge was that HPE 'sometimes gets boring.' Four grade 8 boys used the word 'boring' yet this term was never again mentioned by any other participating students. Furthermore, four grade 8 boys suggested they disliked 'nothing' about HPE while three grade 7 boys stated 'nothing' as well. Having no dislikes about HPE class was revealed by 13% of boys and 14% of girls and turned out to be the third most popular answer relating to dislikes about HPE.



**Table 10 – What do you dislike about HPE class?**

<b>BOYS</b>			<b>GIRLS</b>		
<b>Popular</b>	<b>Total</b>	<b>Percent</b>	<b>Popular</b>	<b>Total</b>	<b>Percent</b>
<b>Themes</b>	<b>Frequency</b>	<b>(%)</b>	<b>Themes</b>	<b>Frequency</b>	<b>(%)</b>
Running	9	19.6	Running	10	20
Lack of Choice/ Boring	6	13	Lack of Choice/ Games Played	7	14
Nothing	6	13	Nothing	7	14
Fitness	3	6.5	Unfair Teams/ Never get the Ball	6	12
Activities					
Sitting Around	3	6.5	Boys Behaviours/ Teasing	4	8
Dance	2	4.3	Privilege Class/ Not everyday	3	6
Too Exhausting	2	4.3	Sitting Around	2	4
Privilege Class/ Not Everyday	1	2.2	Too Exhausting	2	4
			Competition	2	4
			Fitness Activities	1	2

Girls' responses were more varied and included 2 distinct types of comments.

One set of comments described how there was no choice in activities played which led the girls to dislike them. The other comment concerned equality issues such as: "*When people do not pass the ball if we are doing a sport.*" and "*When teams are not fair or*

*people cheat.*” These were themes only brought forward by girls. Findings indicated that 12% of girls believed the teams were unfair or that they did not get the ball while 8% of girls noted boys’ behaviours and teasing as a serious problem. When asked if boys stress cooperation in physical education class, the boys and girls agreed 37% and 32% respectively. However, the belief that girls were more cooperative than boys was not found between the genders. Once again 42% of the sample was undecided, with 36% of girls and 28% of boys who agreed that girls stressed cooperation in physical education class (see Table 11). Chi-Square analysis was used and no statistically significant differences were found for either question. *“What I dislike about Physical Education Class is the games that we do play.”* Seven girls out of 50 expressed their displeasure with the ‘games’ they played.

More pronounced gender differences were written by the grade 6 and grade 7 girls as evidenced by the following comments: *“In Health and Physical education class I dislike that we play the same things over and over again. I also don’t like that we play with boys because they never pass to us girls if boys and girls are on a team.”* and *“I dislike playing with boys, they don’t cooperate as well with girls than they do with boys.”*

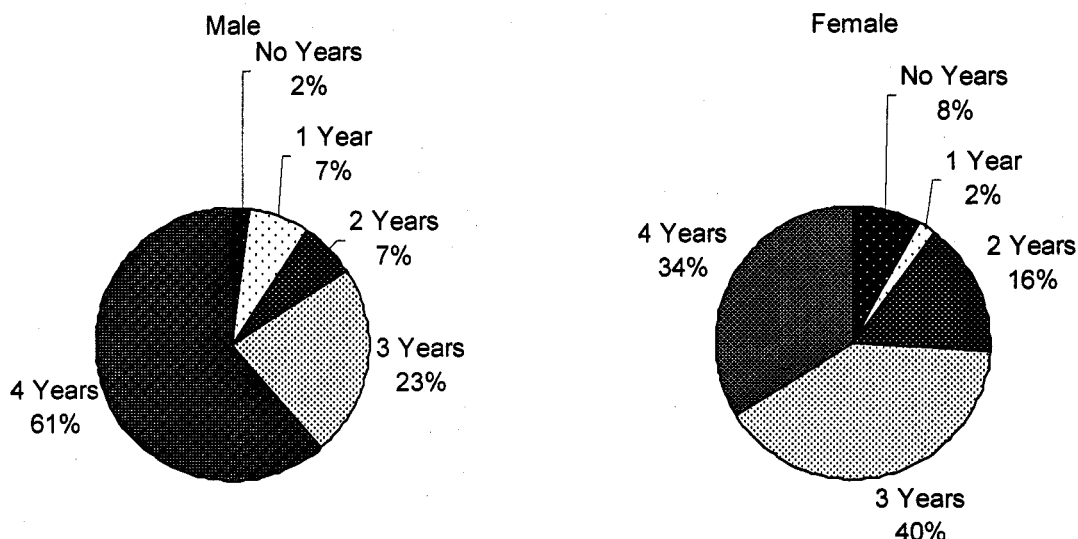
Undeterred by their varied dislikes they experienced in elementary HPE, an overwhelming majority plan to enroll in HPE at the secondary level. Boys and girls responded 96% and 92%, respectively, to sign up for HPE at the secondary level.

**Table 11 – Boys/Girls Emphasize Winning & Boys/Girls Stress Cooperation**

<b>Believe Boys Emphasize Winning (%)</b>				
<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>
Male	76.1	10.9	13	100
Female	76	12	12	100
<b>Believe Girls Emphasize Winning (%)</b>				
Male	23.9	47.8	28.3	100
Female	24	50	26	100
<b>Boys Stress Cooperation (%)</b>				
Male	37	41.3	21.7	100
Female	32	42	26	100
<b>Girls Stress Cooperation (%)</b>				
Male	28.3	41.3	30.4	100
Female	36	42	22	100

Boys and girls were asked how many years they would consider taking HPE at the secondary level. Figure 1 shows that 61% of the males plan to enroll in HPE for 4 years while only 34% of the females selected four years. Only 23% of the boys selected 3 years of HPE, 7% selected 1 or 2 years while only 2% selected no years. The largest group of girls (40%) selected 3 years whereas 16% selected 2 years, 2% for only 1 year but 8% believed they will not enroll in HPE at the secondary level.

**Figure 1 - The number of years students plan to enroll in HPE at the secondary level**



### **Students' Suggestions to Improve the HPE Program**

Boys and girls were asked the question "If you could make changes to the HPE program at your school what would they be?" Table 12 shows the most popular answer found by both boys and girls suggested more choice in the games played (34.8% boys and 38% girls). Additional HPE time was desired by 18 out of 96 (19%) total participating students (9 boys – 19.6% and 9 girls – 18%). No changes to the HPE program were noted by 10.9% of the boys and 10% of the girls. Furthermore, fewer boys than girls requested separate classes for each gender. Only 6.5% of the boys and 10% of the girls believed separating genders would improve the HPE program. Less running was mentioned by 6.5% of the boys and only 4% of the girls. Interestingly, only 4% of the girls suggested a change in the way HPE was assessed.

*"I would increase the amount of time you have and increase the amount of energy wich needs to be used."* – grade 6 boy.

Evidently, he and many others wished for more quality time being active, which was expressed in response to the question: "If you could make changes to the Health and Physical Education program at your school, what would they be?" This grade 8 girl replied: *"I would get everyone to have Health and Physical Education everyday or have longer periods of it."* Despite the small sample of grade 6 students, this girl and boy, respectively, expressed some strongly worded requests for change: *"If I could change the Health and Physical Education class program, I would probably make it all girls and mix up what we do."* *"They would be to have boys at one time of day and girls another. I think this because some boys or girls are afraid of making mistakes around each other."* What is also noteworthy is that a grade 7 girl also felt that boys disparaged the girls: *"To make the boys not say the girls can't do the things the boys do."* Assessment issues appeared in only 2 comments by grade 8 girls: *"To make sure students are being marked on their participation not how well they are at the sport or exercise."* Additional games and sports was another notable theme found among grade 7 students. This particular grade 7 girl wrote: *"I would make it about more sports, dance, etc, and exercise and fun."*

**Table 12 – If you could make changes to the HPE program at your school, what would they be?**

<b>BOYS</b>			<b>GIRLS</b>		
<b>Popular</b>	<b>Total</b>	<b>Percent</b>	<b>Popular</b>	<b>Total</b>	<b>Percent</b>
<b>Themes</b>	<b>Frequency</b>	<b>(%)</b>	<b>Themes</b>	<b>Frequency</b>	<b>(%)</b>
More Choice/	16	34.8	More Choice/	19	38
Pick Games			Pick Games		
Daily Gym/	9	19.6	Daily Gym/	9	18
Longer Period			Longer Period		
Nothing	5	10.9	Nothing	5	10
Separate	3	6.5	Separate	5	10
Genders			Genders		
More Fun	3	6.5	More Active	4	8
Less Running	3	6.5	Less Running	2	4
			More Fun	2	4
			Assessment	2	4

Despite these impediments to enjoying HPE for females, 74% of girls and 83% of boys disagreed with the statement: “I don’t like physical education because boys make fun of me if I cannot perform an activity well.” Only 6% of girls agreed with this statement while 20% were undecided (see Table 13). Furthermore, 86% of girls and 83% of boys did not believe girls made fun of them if they could not perform an activity well. Feeling uncomfortable in front of boys when exercising was expressed by 12% of girls

while 10% of girls felt uncomfortable in front of their classmates (see Table 13). Boys strongly disagreed with both statements (87% and 80.4% respectively).

**Table 13 – Boys/Girls make fun of me if I cannot perform an activity well**

&

Feel uncomfortable in front of Boys/Classmates when exercising

**Do Not Like HPE Because Boys Make Fun Of**

**Me If I Cannot Perform An Activity Well (%)**

<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>
Male	4.3	13	82.6	100
Female	6	20	74	100

**Do Not Like HPE Because Girls Make Fun Of**

**Me If I Cannot Perform An Activity Well (%)**

Male	4.3	13	82.6	100
Female	0	14	86	100

**Feel Uncomfortable In Front Of Boys When**

**Exercising (%)**

Male	6.5	6.5	87	100
Female	12	18	70	100

**Feel Uncomfortable In Front Of Classmates**

**When Exercising (%)**

Male	8.7	10.9	80.4	100
Female	10	10	80	100

### **Opinions about Teachers**

Boys and girls were asked if they would prefer having a male, female or both a male and female HPE teacher. Table 14 shows 37% of boys and only 4.2% of girls preferred a male HPE teacher while 47.8% of boys and the vast majority of girls (72.9%) were undecided. Furthermore, only 4.3% of boys and 18.4% of girls agreed with having a Female HPE teacher while an overwhelming 60.9% of boys and 75.5% of girls were undecided. Many more boys were found to disagree (34.8%) with having a female HPE teacher than girls (6.1%). Chi-Square analysis was used and determined that both findings proved to be statistically significant. Boys and girls were also asked if they would prefer both a male and a female HPE teacher. Table 14 also shows that more boys (52.2%) and girls (40%) agreed with this statement. While 21.7% of boys and 18% of girls disagreed, 26.1 % of boys and 42% of girls were undecided. Chi-Square analysis was used and no statistically significant difference was found.



**Table 14 – Prefer a Male/Female/Both to teach HPE**

<b>Prefer a Male HPE Teacher (%)</b>					
<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>	
Male	37	47.8	15.2	100	Pearson Chi-Square = 15.660 p = .000
Female	4.2	72.9	22.9	100	
<b>Prefer a Female HPE Teacher (%)</b>					
Male	4.3	60.9	34.8	100	Pearson Chi-Square = 14.515 p = .001
Female	18.4	75.5	6.1	100	
<b>Prefer Both a Male &amp; Female HPE Teacher (%)</b>					
Male	52.2	26.1	21.7	100	
Female	40	42	18	100	

Boys and girls were asked a series of questions about their HPE teachers. Table 15 shows the majority of boys (90.9%) and girls (78%) believed their HPE teacher is fun. When asked if their HPE teacher is fair, 69.6% of boys and 88% of girls agreed while 26.1% of boys and 10% of girls were undecided. The sample was also asked if their HPE teacher is easy to talk to. Boys and girls responded similarly, with 73.9% of the boys and 72% of the girls who agreed with this statement while 23.9% of the boys and 24% of the girls were undecided. When asked if their HPE teacher explains things well, 82.6% of the boys and 82% of the girls agreed while 13% of the boys and 16% of the girls remained undecided (see Table 15). Boys and girls again responded in kind to the question: "I think my physical education teacher motivates me to do my best?" Boys and girls agreed 78.3% and 80% respectively, while 17.4% of boys and 16% of girls were

undecided. When asked if their HPE teacher is knowledgeable, 58.7% of boys and 68% of girls agreed while 39.1% of boys and 26% of girls were undecided. Yet when gender of the HPE teacher was cross-tabulated with their perceived knowledge of HPE, results showed that 75% of the students who had a male HPE teacher agreed yet only 46.7% of the students who had a female HPE teacher agreed. Only 20.8% of the students who had a male teacher were undecided while 4.2% disagreed. However, an equal number of students (46.7%) who had a female HPE teacher were undecided while only 4.2% disagreed. The majority of students who had both a male and female teacher believed their HPE teacher was knowledgeable (61.1%) while 38.9% were undecided (see Table 16).

**Table 15 – Boys & Girls perceptions about their HPE teacher**

<b>My HPE Teacher is Fun (%)</b>				
<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>
Male	90.9	6.8	2.3	100
Female	78	16	6	100
<b>My HPE Teacher is Fair (%)</b>				
Male	69.6	26.1	4.3	100
Female	88	10	2	100
<b>My HPE Teacher is Easy to Talk to (%)</b>				
Male	73.9	23.9	2.2	100
Female	72	24	4	100
<b>My HPE Teacher Explains Things Well (%)</b>				
Male	82.6	13	4.3	100
Female	82	16	2	100
<b>My HPE Teacher Motivates Me (%)</b>				
Male	78.3	17.4	4.3	100
Female	80	16	4	100
<b>My HPE Teacher is Knowledgeable (%)</b>				
Male	58.7	39.1	2.2	100
Female	68	26	6	100

**Table 16 – Gender/Knowledge of HPE teacher**

Gender of HPE Teacher	Agree	Undecided	Disagree	Total
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Both Male and Female	11 (61.1%)	7 (38.9)	0	18 (100)
Male Only	36 (75)	10 (20.8)	2 (4.2)	48 (100)
Female Only	14 (46.7)	14 (46.7)	2 (4.2)	30 (100)
Total	61 (63.5)	31 (32.3)	4 (4.2)	96 (100)

### **Students' Perceptions of Single-Gender & Coeducational HPE**

Boys and girls were asked: "What do you think would be different if your Health and Physical Education classes were not coed?" Table 17 shows the most common themes found. Responses were varied and engaging among the sample of boys and girls. The largest theme described by boys involved more competition (30.4%) and that HPE would become too physical (15.2%). Some boys (10.9%) also suggested that HPE class would not be as much fun because they would not be interacting with girls.

Common themes found in girls' responses are also found in Table 17. Girls believed that HPE would not be as fun if it were a girls' only class (32%). A less competitive girls-only HPE class was the next most popular theme, expressed by 26% of girls. Only 18% of girls believed HPE would improve or become more competitive.

*"I think the sports would be a lot more competitive for the boys, and it would be more physical."* This statement was the most prevalent theme made by grade 8 boys. They believed HPE for boys only would be more aggressive and competitive. Words used to describe their perceptions included 'too rough', 'too physical', 'fights', and even 'bullying'. Two boys mentioned that single-gender HPE would not be as fun as it is now.

The following statement, made by a grade 8 boy, expressed an important positive aspect of having coed classes. There would *“be more fights and bullying – now its good because boys don’t want to be disrespectful to the girls.”*

**Table 17** – What do you think would be different if your Health and Physical Education classes were not coed?

<b>BOYS</b>			<b>GIRLS</b>		
<b>Popular</b>	<b>Total</b>	<b>Percent</b>	<b>Popular</b>	<b>Total</b>	<b>Percent</b>
<b>Themes</b>	<b>Frequency</b>	<b>(%)</b>	<b>Themes</b>	<b>Frequency</b>	<b>(%)</b>
More Competitive	14	30.4	Not as Fun/ For The Boys	16	32
Too Physical	7	15.2	Boring Less Competitive	13	26
Not as Fun/ Boring	5	10.9	For The Girls More Competitive/ Improvement	9	18
Less Competitive	4	8.7	Too Social	2	4

*“I don’t think it would be as exciting and as much fun. I prefer co-ed classes. We have fun altogether, I would hate for it to be all girls.”* - grade 8 girl

The most common theme found in the grade 8 girls’ response to the question “What do you think would be different if your Health and Physical Education classes were not coed?” concerned the decreased level of competition. *“I think it would not be as serious but I kind of like co-ed, because it makes me work harder and be more competitive.”*

*"It would be no fun because some of my friends are guys and some girls are my friends."* While boys did not mention the social part of HPE as being significant, three grade 7 boys stated boys only HPE would not be as fun. The 'increased competition' theme was noted 4 times by grade 7 boys while HPE being 'not as fun' was the next significant theme. *"I think it would be more boring if it was only girls and more competitive if it was all boys."* The most common themes noted by the grade 7 girls incorporated the terms 'less fun' or 'boring' 7 times and 'less competitive' 6 times. Only 3 grade 8 girls addressed the perceived lack of competition that would be present in a girls' only HPE class. *"I think that if our Physical Education class wasn't coed, we would improve better without the pressure from boys to win every single thing we play."* While some grade 8 girls wrote that the level of competition would decrease, adversely affecting their level of physical activity, some grade 7 girls saw it as a positive: *"More participating, everybody would fit in, you could have more fun."*

Despite the small sample size, a meaningful trend has materialized. Younger students were more likely to prefer a single-gender HPE class. Five grade 6 boys circled 'coed' while 4 boys circled 'boys only' in regards to HPE. Five grade 6 girls preferred coed HPE while 2 girls preferred 'girls only' HPE. However, some of the statements written by the grade 6 students suggested similar themes as the older students. This grade 6 girl believed the increased level of competition that comes with a coed HPE class is more of a motivator, exerting more energy and can still be fun: *"I think it would be different because I don't think it would be as much fun because it is guys vs girls so you want to try harder than if it was just all girls or all boys."* In contrast, another grade 6 girl stated: *"If my Health and Physical Education classes weren't coed, everyone would*

*get along and it would be more fair for us."* This girl saw HPE improving while the former student clearly implied HPE would not improve.

Boys were asked if they enjoyed HPE class with girls. Table 18 shows that 58.7% of boys agreed and 21.7% disagreed. Boys were also asked if they would prefer to have HPE class with boys only. Table 18 shows only 28.9% of the boys agreed while 44.4% of the boys disagreed. No significant differences were found in the Chi-Square tests.

Girls were asked if they enjoyed HPE class with boys. Table 19 indicates 60% of girls agreed while 12% disagreed. The girls were also asked if they would prefer to have HPE class with girls only. Table 19 shows only 24% of the girls agree while 52% disagree. No significant differences were found after performing Chi-Square tests.

**Table 18 – BOYS: Enjoy HPE class with Girls/Prefer HPE class with Boys Only**

<b>Enjoy HPE Class with Girls (%)</b>				
<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>
Male	58.7	19.6	21.7	100
<b>Prefer HPE with Boys Only (%)</b>				
Male	28.9	26.7	44.4	100

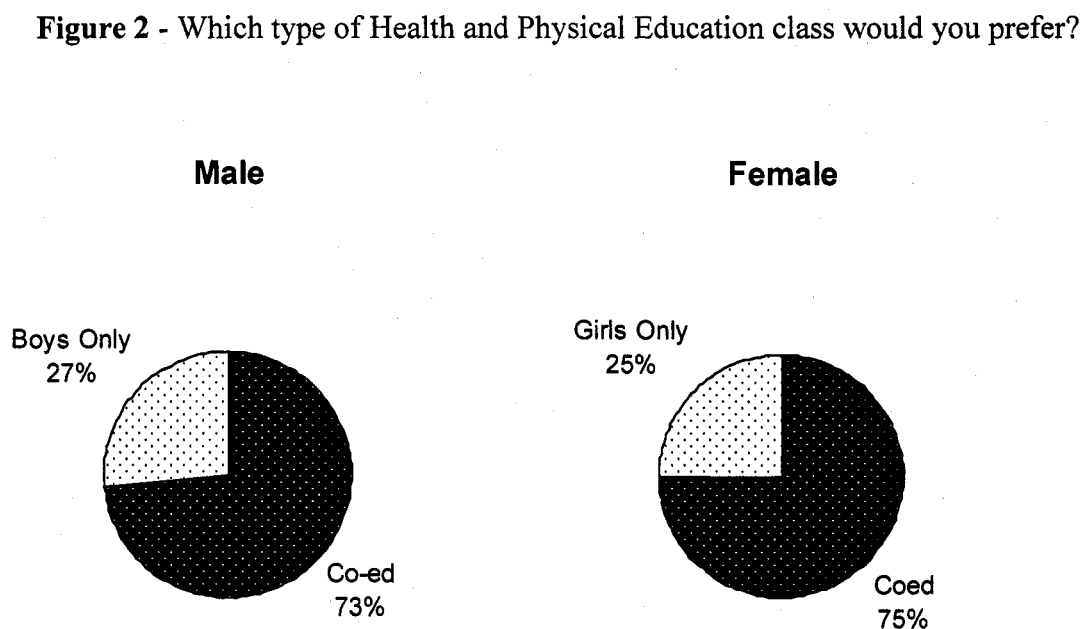
**Table 19 – GIRLS: Enjoy HPE Class with Boys/Prefer HPE Class with Girls Only**

<b>Enjoy HPE Class with Boys (%)</b>				
<i>Gender</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Total</i>
Female	60	28	12	100
<b>Prefer HPE with Girls Only (%)</b>				
Female	24	24	52	100

Boys and girls were asked “Which type of Health and Physical education class would you prefer?” and had 2 choices to circle, either coed or boys only/girls only.

Figure 2 shows that 27% of boys and 25% of girls selected single gender HPE classes.

The majority (73% boys and 75% girls) preferred coed HPE.





## CHAPTER IV

### DISCUSSION

*"I like the exercise and the fun of it. Even if you don't have the best athletic ability, it is fun to learn and go along with it." - grade 7 girl*

Teenage boys and girls are not sufficiently involved in physical activities that contain physical and health benefits. They were found to have a 40% and 30% participation rate, respectively, outside of school (Health Canada, 2002). The purpose of this study was to investigate the relationship between gender and elementary school students' perceptions of Health and Physical Education in a coeducational setting. No statistically significant relationship between gender and elementary school students' perceptions of HPE in a coed setting was hypothesized. The results of this study indicated that statistically significant relationships were discovered among and between the sample of boys and girls regarding HPE. However, some significant differences were also found between the two groups. This discussion will include findings relating to: teacher differences, individual and team games, coeducational and single-gender HPE, physical activities, participation, likes and dislikes, and recommendations.

#### **Teacher Differences**

The results of this study revealed 37% of boys and 4.2% of girls preferred a male HPE teacher. This significant difference, found in the Chi-square test, contrasts other studies which found the gender of the HPE teacher was an insignificant issue (Gibbons, et al., 2000; Lirgg, 1994). Teacher's gender was found to be more meaningful for boys than for girls in this study. Likewise, only 4% of boys and 18% of girls preferred a female HPE teacher. Both questions received a higher percentage of students who were

undecided on the issue. From this study, it appears that while the majority of boys and girls prefer coed HPE, boys prefer to receive instruction from a male HPE teacher while girls prefer a female HPE teacher. Sullivan's (2003) findings showed girls preferred a female HPE teacher more than a male HPE teacher. While 34.8% of boys did not want a female HPE teacher, 22.9% of females did not want a male HPE teacher. Consensus was strongest among the sample with a preference towards having both a male and female HPE teacher. This study found 52.2% of boys and 40% of girls preferred both genders to instruct HPE. Additional results indicated that 75% of the students who had a male HPE teacher believed he was knowledgeable whereas only 46.7% of the students who had a female HPE teacher believed she was knowledgeable. This was a surprising result as the findings were not expected to stray from the previous literature. The majority of students (61.1%) who have both a male and female HPE teacher that instruct HPE at different times throughout the year believed both teachers were knowledgeable while 38.9% of the students were undecided and no students disagreed. Perhaps having teachers co-instruct HPE units throughout the year might be a way to reduce students' perceptions about female teachers being less knowledgeable. While having two HPE teachers throughout the year may not be financially feasible, providing workshops in HPE would benefit both teachers and students. Teachers who are provided with appropriate ideas and strategies are better able to meet the diverse needs of all students by introducing varied, developmentally appropriate and interesting HPE lessons (Mills, 2005). According to Vorkapich (1997), many female teachers feel uncomfortable teaching HPE and coaching. This may be one reason why so few boys and girls preferred to have a female HPE teacher.

While perceptions of the teachers was beyond the initial scope of this study, as previous literature found no significant differences, one explanation may be that more teachers in grades 7 and 8 tend to be male than in other elementary grades. Yet another reason may be sex-role stereotypes the boys and girls have observed through their years in school. "A sex-role stereotype may be defined as an attitudinal or behavioural bias against individuals in identical situations engaged in identical behaviours because of their membership in some specific sexual group." (Unger, 1979, p.27). The boys and girls may have formed beliefs about females as being less knowledgeable than males based on their earlier experiences in HPE with female teachers, while intramurals, interscholastics and physical activities outside of school are more likely to be coached by males.

### **Individual and Team Games**

Individual games such as tennis and badminton were not as popular with this sample as team games. A significant difference, according to Chi-square tests, was uncovered from the sample's response in regards to playing individual games with girls. While 63% of boys and 76% of girls agreed, 26.1% of boys and only 2% of girls disagreed. Boys were more inclined to play individual sports with other boys than with girls. A possible reason for this outcome could be due to boys' competitive nature and desire to win more than for girls. Boys and girls (76%) agreed that boys emphasize winning while only 24% of boys and girls agreed that girls emphasize winning. If competition and the desire to win are of significance, enjoyment of the physical activity itself becomes undermined (Mitchell, 2004). Results of this study indicated 91% of boys and 74% of girls enjoyed playing team games with boys while only 63% of boys and 86% of girls enjoyed playing team games with girls. The reason boys preferred playing

team games with boys may be due to the increased level of competition they believe will occur compared to playing team games with girls. Furthermore, Fairclough and Stratton (2005) found physical activity levels were highest when team games were played. Boys (30%) stated the level of competitiveness would increase if the classes were boys only while it was perceived to decrease when playing games with girls. Girls believed girls-only HPE would not be as fun (32%) and would be less competitive (26%) than in the present coeducational setting. Yet more girls enjoyed playing team games with girls (86%) than playing team games with boys (74%).

### **Coeducational & Single-Gender HPE**

*“Exercise will be more suited to my gender, more cooperation. More cooperation and teamwork.” - grade 8 girl*

Although it was expected more girls would favour single-gender HPE than boys, surprisingly only 25% of girls and 27% of boys were found to prefer single-gender HPE classes. While Lirgg's (1994) findings suggested girls should receive coeducational HPE at the secondary level and allow single gender HPE at the middle school level, the findings from this study suggested something different. This sample of boys and girls selected coed HPE 73% and 75% respectively. These findings are comparable to a study involving other middle school students. Koca, Asçi and Demirhan (2005) discovered 73% of boys and 73% of girls from coeducational schools preferred coeducational HPE.

*“I think that if our Physical Education class wasn't coed, we would improve better without the pressure from boys to win every single thing we play.”*

- grade 7 girl

Perceptions of what single-gender HPE would be like differed between boys and girls. Although 30.4% of boys believed HPE would become more competitive, 32% of girls believed HPE would not be as much fun if it were not coeducational. Boys also believed boys-only HPE would result in more physical play (15.2%) while 10.9% of boys believed it would not be as much fun. Girls believed girls-only HPE would be less competitive (26%) for them while 18% of girls believed HPE would improve and be more competitive. McKenzie et al. (2004) found girls benefited more in coed HPE classes. The level of intensity and the amount of physical exertion was greater in coeducational classes for girls. Boys experienced very little difference in the amount of energy expended during coeducational or boys-only HPE. The girls from this study enjoyed HPE with boys because they enjoyed competing against them. This rivalry can be intense and can have a positive effect on everyone's cardiovascular strength. Allowing the genders to perform physical activities together also allows the students to appreciate the differences in strength and other physiological attributes. Developing social relationships and learning to respect each others' differences benefits the students in a coed setting (Gibbons & Van Gyn, 1996). However, Frömel (2002) believed coed HPE is ineffective since the unique needs of boys and girls are not met.

### **Physical Activities**

Boys and girls expressed differences in the types of activities they enjoyed. Boys in this study overwhelmingly selected dodgeball/king's court (56%). This was not surprising since boys enjoy the competitive nature of this game and it allows students to throw a ball at fellow classmates. While dodgeball may be fun for the boys, only 20% of girls listed dodgeball/king's court as an activity they enjoy. While this game does

contain some health benefits, throwing a ball at other students should not be allowed. If it is not tolerated on the playground, then it should not be encouraged in the gymnasium. It would be preferable if the locomotion and manipulation skills were taught with a more appropriate, positive and fun approach.

Girls strongly preferred volleyball (62%) compared to just 19.6% of boys. This sport requires students to learn and practice locomotion and manipulation skills in a non-contact environment. Girls were found to have a preference toward activities such as volleyball (Osbourne et al., 2002) since it is a low-intensity activity compared to basketball or soccer. In spite of the previous research, many girls sampled do, in fact, enjoy high-intensity activities such as soccer and basketball. Results showed that 48% of girls wrote down soccer compared to 32.6% of boys while 38% of girls noted basketball compared to 45.7% of boys. All of these common team games were highly popular with boys and girls. Yet, when these students were asked what changes they would make to the HPE program, 34.8% of boys and 38% of girls recommended additional choices or a greater variety of activities to play. Increasing the amount of time for HPE and having it daily was recommended by 19.6% of boys and 18% of girls. Past studies found female students considered the variety of physical activities from their elementary experience when deciding whether to continue HPE at the secondary level (Cavar, 2002; Humbert, 1995). Even though no space was provided for students' comments regarding future HPE enrollment plans, one girl wrote down that she would participate in HPE for 4 years only if she enjoys it. From this sample, 61% of boys and 34% of girls planned to enroll in HPE for 4 years at the secondary level. It is difficult to speculate why there is such a sizeable difference between boys and girls interest in HPE enrollment at the secondary

level. However, it is encouraging that 84% of boys and 74% of girls will consider enrolling in HPE for 3 or 4 years based on their present experiences of elementary HPE. Adding a wider variety of activities which appeal to boys and girls or putting a new twist on standard HPE activities may stimulate greater interest to continue in HPE at the secondary level.

Running was disliked by 21.7% of boys and 28% of girls in this sample. While running was the most disliked activity noted by girls, the boys listed volleyball as their most disliked activity. In my experience as a teacher, anytime the word 'running' was uttered, many faces would begin to cringe. However, during the past 2 years, my HPE classes would run with and without a piece of equipment of their choice. The students measure time and heart rate before and after the run. We discussed why the times were slower with the equipment, the differences in heart rate and its importance to one's health. The students also stated, enthusiastically, they enjoyed running with the equipment (i.e., basketball, soccerball, etc...) since their focus was not on running but rather on the piece of equipment. While the class still had to run, they have experienced for themselves that running is just as much a mental activity as it is a physical activity. When they run again, they begin to develop strategies which distract them from an activity which is usually regarded as exhausting and boring.

Despite volleyball showing up as the least popular activity for boys (23.9%), 14% of girls also wrote down volleyball as a disliked activity. Boys may not enjoy volleyball because it is a non-contact sport. Other reasons why the sample of girls enjoyed volleyball (62%) so much more than boys (19.6%) may be due to the fact that this questionnaire was presented to the students during the elementary schools interscholastic

volleyball season. It could be that the girls' teams were experiencing great success while the boys' teams may have been performing poorly. Furthermore many teachers match their HPE lessons with the interscholastic calendar to complement the skills being practiced by the teams.

### **Participation, Likes & Dislikes of HPE**

*"Get active, have fun and no homework." - grade 7 boy*

Nearly all the boys and girls in this study, 95.7% and 90% respectively, enjoyed participating in elementary HPE. This finding is similar to the findings of Carroll and Loumidis (2001) where more boys were found to enjoy HPE than girls. While the results are close, it is important to note that the amount of physical activity tends to decrease for boys and girls as they age (Higgins et al., 2003). Findings from this study suggest boys and girls believe they have an equal opportunity to participate in HPE activities. The majority of boys and girls, 80.4% and 92% respectively, believe an equal opportunity to participate in HPE activity exists in their class.

*"I like the fact that when you take part in the physical education class you are being healthy and having fun at the same time." - grade 7 girl*

Being healthy, active and fun were popular themes to emerge from this study when the students were asked about what they like about HPE class. It is encouraging to see that both genders are associating healthful benefits and fun with the physical activities performed in HPE class. This is of absolute importance if the goal of HPE is to provide students with the knowledge and skills to continue being active outside school and throughout their adult lives (Fairclough & Stratton, 2005). Being active and healthy was reported by 39.1% of boys and 56% of girls and was the most popular theme to



emerge. The discrepancy between boys and girls may suggest that girls are more aware of the health benefits and take it more seriously than boys. While 30.4% of boys and 50% of girls like HPE class because it is fun, 4.16% of the sample complained that HPE class is used as a classroom management tool.

*“Not being able to play gym if we aren’t listening in class.” - grade 7 girl*

Classes do not miss science or math when they are disruptive, so why do teachers use HPE as a way to prevent their students from misbehaving? The only reason this tactic works is because teachers know HPE is a ‘fun’ subject which the students value. By exploiting and marginalizing HPE as a privileged subject, not a right, teachers send the wrong message to their students. It tells students that HPE is of less value and importance when compared to science or math. Another way HPE is being marginalized is through school board initiatives. Workshops are regularly offered for subjects such as language arts and math. Yet no experienced teacher I asked, informally, could recall attending or being offered a workshop pertaining to HPE. Teachers and parents must do a better job demonstrating the importance of a healthy and active lifestyle.

Human behaviours are learned through modeling, according to Bandura’s (1977) Social Learning Theory. Students require male and, particularly, female teachers who model healthy habits and who are competent and comfortable teaching the HPE curriculum, coaching interscholastic sports, and are involved with intramurals. Simply eating a healthy lunch during lunch supervision and making subtle comments regarding the level of nutrition found in students’ lunches is one easy way for teachers to model healthy behaviours. Students also need parents to model healthy eating habits and encourage physical activity at home. Girls require a proper role model from home

more so than boys. Girls were found to name a family member as a role model while boys tended to select celebrity male athletes (Kulinna, 2004). Girls were also found to have fewer role models involved in physical activity compared to boys (Garcia et al., 1998). The importance of modeling appropriate behaviours in front of these impressionable young students cannot be discounted if we are to increase the level of physical activity for boys and especially for girls. The participation rate at school was found to be 81% for boys and 71% for girls who selected 'All of the Time' while 19% of boys and 27% of girls selected 'Most of the Time'. Parents and the community must find ways to keep these students active outside of the school in a manner that encourages fitness for fun and for life.

### **Recommendations**

- Add a wider variety of activities to the usual repertoire of activities. This was recommended by 34.8% of boys and 38% of girls from this study. The type of curriculum taught in HPE has been found to be a significant factor for students when deciding whether to enroll in HPE for the following year (Luke & Sinclair, 1991; Olafson, 2002; Stewart & Corbin, 1989). More attention needs to be made to select activities that boys, and especially girls, enjoy playing if they are to remain active as they get older.
- Ensure the Ontario curriculum guidelines for HPE (1998) are being taught with a genuine intent to develop positive attitudes in students towards healthy active living. Teachers must ensure an enjoyable and safe environment so that students can continue in their locomotion, manipulation and stability skills development. Through positive reinforcement and providing sufficient time for boys and girls to

become more competent in their skills, students will be more likely to participate in the activities being taught (Bois, Sarrazin, Brustad, Trouilloud & Cury, 2005).

- Provide workshops for teachers and coaches (Vorkapich, 1997). This will help increase the confidence of teachers, particularly female teachers, who feel under-qualified and are hesitant to take on coaching duties due to their lack of knowledge. Results from this study showed that male teachers were perceived to be more knowledgeable in HPE than females. Students with a male HPE teacher believed their teacher is much more knowledgeable than students with a female HPE teacher, 75% compared to 46.7% respectively. Students need more female teachers to coach interscholastic sports in order to improve the perceptions students presently possess. While the Ministry of Education's new initiative is aggressive, it will teachers to upgrade their HPE skills and to learn more developmentally appropriate activities that can be performed in 20 minutes compared to the usual 30 minutes periods.
- Provide parents with ideas to get their children active at home. Inform parents of the importance of modeling healthy behaviour. Parents must extend even more support and encouragement towards their children as they get older to live a physically active lifestyle and to eat healthy.
- Schools have access to nearly all young children and must take advantage of the opportunity to ensure HPE is delivered in a positive and inclusive environment. *"Boys never pass to the strong girls and girls never do anything."* The level of frustration expressed by this grade 8 girl needs to be addressed by the teacher so that a coeducational environment can provide more positive, social interactions

for all students. Students from this study want HPE to continue in a coed environment. Teachers will require new strategies to help minimize the concerns students have by having HPE class in a coed setting.

- School administrators and school boards can encourage alternate means of transportation to and from school. Administrators can also encourage schools to provide regular intramural programs to complement the HPE curriculum. Health and Physical Education should focus on skill development in a fun atmosphere where the emphasis is on teamwork and cooperation, not winning. Interscholastic teams can focus on competition and proper sports etiquette.
- *"I dislike playing games which require you to wait a long time to do something."*

- grade 6 boy

*"When you don't get put out to play and spend half the time on the bench."*

- grade 7 girl

Ensure time is being well spent with a minimal amount of time used to deliver instructions and maximizing amount of time students are active. Proper teacher planning is the key (DeCorby, Halas, Dixon, Wintrup and Janzen, 2005). The new active schools initiative requires teachers to provide a warm-up and cool-down activity with each HPE session. Teachers will need new ideas on how to deliver instructions more efficiently and will require a new set of activities to add to their repertoire which can be performed in no more than 15 minutes, with minimal equipment and setup.

- More research must be performed regarding male and female teachers' attitudes and perceptions about HPE, how they prepare their HPE lessons and how

comfortable they are teaching HPE. Furthermore, more research should be carried out to determine how boys and girls perceive male and female HPE teachers.

- More research regarding the effectiveness and health benefits of HPE programs (Janzen, 2004) with both short-term and long-term perspectives. Past provincial governments have neglected HPE and have not provided the funding necessary to support a quality HPE program in Ontario's school system (Mills, 2005).
- Study how to encourage physical activity among youth (Garcia et al., 1998), especially outside of school. Government agencies at all levels must be involved, working together with the schools to establish policies and programs that encourage healthy habits both after school and once the students have graduated from secondary school.
- Continue to research gender differences in HPE at schools and through organizations which provide physical activities for competitive and recreational purposes.

In this study, boys and girls were found to enjoy participating in HPE but had different perceptions about their HPE teachers' knowledge. This could be due to the stereotypes associated with athletics and physical activities. More sports involving males are televised and attendance for male athletic events such as professional soccer and basketball bring more spectators and are better advertised than female athletic events. Newspapers will publish many more articles concerning men's athletics than women's athletics. While these stereotypes of males and females may not begin in high school, they persist and may be a reason why girls do not plan to enroll in HPE for as many years

as boys. Social learning theory (Bandura, 1977) notes that children must perceive the activity as suitable for their gender before it is attempted. Schools must provide their students with many opportunities to model physical activities in a gender-neutral setting. An understanding of the differences between boys and girls and a greater tolerance for individuals is part of the HPE curriculum for grade 9 students. The active living curriculum replaces the active participation curriculum from elementary HPE and specifically promotes health and physical activity for life.

*“It wouldn’t be as competitive because boys and girls are always competitive and make people want to play.” - grade 8 boy*

Boys and girls who participated in this study stated their preference for HPE to remain in a coeducational setting. If this is true, in general, for boys and girls, more athletic organizations should take advantage of this by establishing coed activities to draw more participants into athletics and to keep the students active in an enjoyable atmosphere. While more girls commented about being teased by the boys, it is up to the teacher to make sure at the beginning, and throughout, the school year that these concerns do not become an impediment for girls’ enjoyment of HPE. Girls are entitled to a harassment-free environment and teachers need to be conscious of the fact that teasing is likely to occur. The girls from this study stated that teams were unfair; they were not being included in play because the ball was not being passed to them, and teasing from boys occurred. Teachers need to discuss the differences in physiology between boys and girls and try to inform all students that skill levels vary not just between the genders but also among each individual. Growth hormones are strong during this transition time and should also be included in any discussion. However these hormones may also be why

grade 7 and 8 students preferred coed HPE at a greater rate than grade 6 students.

Perhaps offering physical activities in a coed setting may help stimulate greater involvement for young adolescents and better promote living a healthy, active lifestyle.

Physical activity levels were found to be higher when team games were played compared to individual games (Fairclough & Stratton, 2005). The students in this study stated their preference towards team activities. Furthermore, the CAHPERD (1997) document noted that it was much easier to establish healthy living habits in childhood, and the new active schools initiative is doing just that. The Daily Physical Activities in Schools document gives the students something which they value and want more of, according to the findings in this study. They wish to have more HPE on a daily basis and the government is mandating that it occurs during instructional time. However, administrators must ensure that HPE is not used as classroom management tool. All students are to receive HPE instruction on a daily basis. It is hoped that the students' voices' are heard by the results provided by the students from this sample. It is encouraging to know that the present government has also noted the problem that too many students are not physically active enough to sustain any significant health benefits. However, for this program to be a success, it will depend on the teachers to carry it out effectively, keeping in mind the best interest of their students when planning the physical activities.

## CHAPTER V

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## CHAPTER VI APPENDIXES

### APPENDIX A Survey Instrument

#### Female Health and Physical Education Survey

**Student Demographic Information: Please fill in the blanks below:**

Grade \_\_\_\_\_ Age \_\_\_\_\_

Please circle the most appropriate answer:

I participate in Health and Physical Education activities:

**all of the time                      most of the time                      sometimes                      never**

I have both a male and female physical education teacher. **yes      no**

My physical education teacher is male. **yes      no**

My physical education teacher is female. **yes      no**

Please circle your answers to the following questions:

1. I enjoy participating in activities taught in my physical education class.

**Agree                      Undecided                      Disagree**

2. I enjoy having physical education class with boys.

**Agree                      Undecided                      Disagree**

3. I would prefer having physical education with girls only.

**Agree                      Undecided                      Disagree**

4. I would prefer having a male physical education teacher.

**Agree                      Undecided                      Disagree**

5. I would prefer having a female physical education teacher.

**Agree                      Undecided                      Disagree**

6. I would prefer having both a male and a female physical education teacher.

**Agree                      Undecided                      Disagree**

7. I believe physical education is a time when I can socialize with my friends.

**Agree                      Undecided                      Disagree**

8. I believe the activities taught in my physical education class are primarily for boys.

**Agree                      Undecided                      Disagree**

9. I believe the activities taught in my physical education class are primarily for girls.

**Agree                      Undecided                      Disagree**

10. I believe boys stress cooperation in physical education class.

**Agree                      Undecided                      Disagree**

11. I believe girls stress cooperation in physical education class.

**Agree                      Undecided                      Disagree**

12. I believe boys place strong emphasis on winning in physical education activities.

**Agree                      Undecided                      Disagree**

13. I believe girls place strong emphasis on winning in physical education activities.

**Agree                      Undecided                      Disagree**

14. I enjoy playing team games (basketball, volleyball, soccer, etc.) with boys.

**Agree                      Undecided                      Disagree**

15. I enjoy playing team games (basketball, volleyball, soccer, etc.) with girls.

**Agree                      Undecided                      Disagree**

16. I enjoy playing individual sports (tennis, badminton, etc.) with boys.

**Agree                      Undecided                      Disagree**

17. I enjoy playing individual sports (tennis, badminton, etc.) with girls.

**Agree                      Undecided                      Disagree**

18. I believe girls have an equal opportunity with boys to participate in class activities.

**Agree                      Undecided                      Disagree**

19. I don't like physical education because boys make fun of me if I cannot perform an activity well.

**Agree                      Undecided                      Disagree**

20. I don't like physical education because girls make fun of me if I cannot perform an activity well.

**Agree                      Undecided                      Disagree**

21. I feel uncomfortable running/exercising in front of boys in physical education class.

**Agree                      Undecided                      Disagree**

22. I feel uncomfortable running/exercising in front of classmates in physical education class.

**Agree                      Undecided                      Disagree**

23. I think my physical education teacher is fun.

**Agree                      Undecided                      Disagree**

24. I think my physical education teacher is fair.

**Agree                      Undecided                      Disagree**

25. I think my physical education teacher knows a lot about physical education.

**Agree                      Undecided                      Disagree**

26. I think my physical education teacher is easy to talk to.

**Agree                      Undecided                      Disagree**

27. I think my physical education teacher explains things well.

**Agree                      Undecided                      Disagree**

28. I think my physical education teacher motivates me to do my best.

**Agree                      Undecided                      Disagree**

29. I prefer to sit on the benches during physical education class.\*

**Agree                      Undecided                      Disagree**

\* If you responded "agree" to question #29 above, please explain why:

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**Please answer the following questions.**

1. What physical activities do you like the most?

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2. What physical activities do you dislike the most?

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3. What do you like about Health and Physical Education class?

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4. What do you dislike the most about Health and Physical Education class?

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5. If you could make changes to the Health and Physical Education program at your school, what would they be?

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6. What do you think would be different if your Health and Physical Education classes were not coed?

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7. Which type of Health and Physical Education class would you prefer?  
(Please **circle** only one answer)

**Coed**

**Boys only/Girls only**

8. Are you planning to take Health and Physical Education in high school?

**Yes**

**No**

If you circled **yes**, for how many years do you think you will take it?

(Please **circle** the best answer)

**1**

**2**

**3**

**4**

### Male Health and Physical Education Survey

**Student Demographic Information: Please fill in the blanks below:**

Grade \_\_\_\_\_ Age \_\_\_\_\_

Please **circle** the most appropriate answer:

I participate in Health and Physical Education activities:

**all of the time                      most of the time                      sometimes                      never**

I have both a male and female physical education teacher. **yes      no**

My physical education teacher is male. **yes      no**

My physical education teacher is female. **yes      no**

Please **circle** your answers to the following questions:

1. I enjoy participating in activities taught in my physical education class.

**Agree                      Undecided                      Disagree**

2. I enjoy having physical education class with girls.

**Agree                      Undecided                      Disagree**

3. I would prefer having physical education with boys only.

**Agree                      Undecided                      Disagree**

4. I would prefer having a male physical education teacher.

**Agree                      Undecided                      Disagree**

5. I would prefer having a female physical education teacher.

**Agree                      Undecided                      Disagree**

6. I would prefer having both a male and a female physical education teacher.

**Agree                      Undecided                      Disagree**

7. I believe physical education is a time when I can socialize with my friends.

**Agree                      Undecided                      Disagree**

8. I believe the activities taught in my physical education class are primarily for boys.

**Agree                      Undecided                      Disagree**

9. I believe the activities taught in my physical education class are primarily for girls.

**Agree                      Undecided                      Disagree**

10. I believe boys stress cooperation in physical education class.

**Agree                      Undecided                      Disagree**

11. I believe girls stress cooperation in physical education class.

**Agree                      Undecided                      Disagree**

12. I believe boys place strong emphasis on winning in physical education activities.

**Agree                      Undecided                      Disagree**

13. I believe girls place strong emphasis on winning in physical education activities.

**Agree                      Undecided                      Disagree**

14. I enjoy playing team games (basketball, volleyball, soccer, etc.) with boys.

**Agree                      Undecided                      Disagree**

15. I enjoy playing team games (basketball, volleyball, soccer, etc.) with girls.

**Agree                      Undecided                      Disagree**

16. I enjoy playing individual sports (tennis, badminton, etc.) with boys.

**Agree                      Undecided                      Disagree**

17. I enjoy playing individual sports (tennis, badminton, etc.) with girls.

**Agree                      Undecided                      Disagree**

18. I believe boys have an equal opportunity with girls to participate in class activities.

**Agree                      Undecided                      Disagree**

19. I don't like physical education because boys make fun of me if I cannot perform an activity well.

**Agree                      Undecided                      Disagree**

20. I don't like physical education because girls make fun of me if I cannot perform an activity well.

**Agree                      Undecided                      Disagree**

21. I feel uncomfortable running/exercising in front of boys in physical education class.

**Agree                      Undecided                      Disagree**

22. I feel uncomfortable running/exercising in front of classmates in physical education class.

**Agree                      Undecided                      Disagree**

23. I think my physical education teacher is fun.

**Agree                      Undecided                      Disagree**

24. I think my physical education teacher is fair.

**Agree                      Undecided                      Disagree**

25. I think my physical education teacher knows a lot about physical education.

**Agree                      Undecided                      Disagree**



26. I think my physical education teacher is easy to talk to.

**Agree**

**Undecided**

**Disagree**

27. I think my physical education teacher explains things well.

**Agree**

**Undecided**

**Disagree**

28. I think my physical education teacher motivates me to do my best.

**Agree**

**Undecided**

**Disagree**

29. I prefer to sit on the benches during physical education class.\*

**Agree**

**Undecided**

**Disagree**

\* If you responded "agree" to question #29 above, please explain why:

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---



---

**Please answer the following questions.**

1. What physical activities do you like the most?

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---



---

2. What physical activities do you dislike the most?

---



---



---

3. What do you like about Health and Physical Education class?

---



---



---

4. What do you dislike the most about Health and Physical Education class?

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---



---

5. If you could make changes to the Health and Physical Education program at your school, what would they be?

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---

6. What do you think would be different if your Health and Physical Education classes were not coed?

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7. Which type of Health and Physical Education class would you prefer?  
(Please **circle** only one answer)

Coed                      Boys only/Girls only

8. Are you planning to take Health and Physical Education in high school?  
Yes                      No

If you circled **yes**, for how many years do you think you will take it?  
(Please **circle** the best answer)

1              2              3              4

## APPENDIX B

## Copy of email to Sullivan

Sent Message

Page 1 of 1

**From:** "Naim P" <naim@uwindsor.ca>  
**Subject:** permission to use survey instrument  
**Date:** Sat, 17 Sep 2005 14:37:47 -0400  
**To:** sulls2@chartertn.net



Dear Shannon Sullivan,

I am writing to find out if I could use your survey instrument in your dissertation as a template for my survey instrument as part of my master's thesis. I am a Master of Education student at the University of Windsor, Canada and found your survey instrument to be very appropriate for my thesis work dealing with gender differences and perceptions of Physical Education at the junior level.

Thank you for considering my request,

Paul Naim

## APPENDIX C

## Research Ethics Board Approval Letter



Today's Date: October 5, 2005  
 Principal Investigator: Mr. Paul Jacob Naim  
 Department/School: Education  
 REB Number: 05-174  
 Research Project Title: The relationship between gender and elementary school students' perceptions of Health and Physical Education in a coeducational setting  
 Clearance Date: October 4, 2005  
 Project End Date: December 31, 2005  
 Progress Report Due:  
 Final Report Due: December 31, 2005

This is to inform you that the University of Windsor Research Ethics Board (REB), which is organized and operated according to the *Tri-Council Policy Statement* and the University of Windsor *Guidelines for Research Involving Human Subjects*, has granted approval to your research project on the date noted above. This approval is valid only until the Project End Date.

A Progress Report or Final Report is due by the date noted above. The REB may ask for monitoring information at some time during the project's approval period.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Minor change(s) in ongoing studies will be considered when submitted on the Request to Revise form.

Investigators must also report promptly to the REB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

Forms for submissions, notifications, or changes are available on the REB website: [www.uwindsor.ca/reb](http://www.uwindsor.ca/reb).

We wish you every success in your research.

*Maureen Muldoon*

Dr. Maureen Muldoon  
Chair, Research Ethics Board

cc: Dr. Yvette Daniel, Education  
Linda Bunn, Research Ethics Coordinator

The procedures for conducting this survey are as follows:

1. The subjects will be asked by their homeroom teacher/principal to take home the permission forms and return them within 3-5 days.
2. On a specified day, the researcher will visit the classroom and administer the questionnaire. The researcher will go over all the rights of the students and review the questionnaire with the subjects. Students with parent/guardian permission and are still willing to participate will then be given the student assent form to sign and date.
3. The subjects will be given approximately 30 minutes of classtime to circle one of three choices: agree, undecided, or disagree, for 29 questions. Furthermore, the subjects will answer eight questions, six of which are short answer. Basic demographic information will also be filled in by the subjects. Pencils and erasers will be provided by the researcher.

Subjects, and their parents, will be able to access the results from the Research Ethics Board site ([www.uwindsor.ca/reb](http://www.uwindsor.ca/reb)). Copies of the study will be given to the XXXXXX and, if you wish, a presentation may be arranged. Requests by parents for a hardcopy will also be accepted.

Participants can choose whether to be in this study. If they volunteer, they may withdraw at any time without any consequences. They may exercise the option of removing their data from the study. They may also refuse to answer any questions they do not want to answer and still remain in the study. The subjects will be made aware of their right to withdraw at any time when the questionnaire is administered and when the participants and their parents read and fill-out the assent and consent forms, respectively.

Subjects, and their responses, will remain confidential. No details regarding the subjects' responses will be disclosed unless written consent is provided by the parent/guardian and student. No names will be recorded on the questionnaire. Names of those who have permission to participate will be kept on file and a number will be recorded on the questionnaire. The questionnaires will remain secured, in a fireproof safe, at the researcher's residence for 3 years before they are shredded and disposed of in the garbage.

If you have any questions or concerns about the research, please feel to contact me at home (XXX-XXXX) or by BBS at XXXXXX. My faculty advisor, Dr. Yvette Daniel, University of Windsor, can be reached at 253-3000 ext. 3824 or by e-mail at [vdaniel@uwindsor.ca](mailto:vdaniel@uwindsor.ca).

Thank you for taking the time to consider my request. I hope to hear from you soon so that I can carry out my investigation during the month of October, 2005.

Sincerely,

Paul Naim  
Teacher

APPENDIX E  
Letter of Permission to Principals



LETTER OF INFORMATION FOR PRINCIPAL

10/XX/2005

Dear Principal:

As part of the requirements for my Master of Education degree, I am conducting a survey, under the supervision of my faculty advisor Dr. Yvette Daniel ([ydaniel@uwindsor.ca](mailto:ydaniel@uwindsor.ca)), regarding the differences between Boys' and Girls' perceptions towards Health and Physical Education in a coeducational setting at the elementary school level. To assist me in achieving the proper amount of data, I respectfully request your cooperation in conducting a survey of your students from grades 6 through 8. It is hoped that through this survey, students can have a voice in determining the direction of future health and physical education programs. The insufficient amount of physical activity is a concern for all of us. The results will also be of value to our school board, teachers, coaches, and parents and will help us better prepare these students to become more aware of the importance of developing a long-lasting healthy and active lifestyle.

The study has been approved by the Research Ethics Board of The University of Windsor and XXXXXXXX, Superintendent of Education, of the XXXXXXXX. Information received by the participants will be held in the strictest of confidence and results will be made available at <http://www.uwindsor.ca/reb>. All students participating will not be asked to write their names on the questionnaire. Students will be free to withdraw from participation in this study at any time. There are no risks involved as the students will be responding to a multiple choice questionnaire and six short answer questions. There is no compensation for assisting in this study.

To perform the study, I request permission to ask your teachers for use of their classroom and approximately 30 minutes of their instructional time at a date to be determined later so I can personally administer the questionnaire. Your teachers will be needed to distribute and collect the permission forms.

I will forward an advance copy of the questionnaire for review. Should you have any questions or concerns, please feel free to contact me at work (XXX-XXXX), at home (XXX-XXXX), or by BBS at [XXXXXXX](mailto:XXXXXXX).

Thank you for taking the time to consider my request. I hope to hear from you soon so that I can carry out my investigation during the month of November, 2005.

Sincerely,

Paul Naim  
Teacher

## APPENDIX F

## Letter of Permission to Teachers



## LETTER OF INFORMATION FOR TEACHER

10/XX/2005

Dear Colleague:

As part of the requirements for my Master of Education degree, I am conducting a survey, under the supervision of Dr. Yvette Daniel ([ydaniel@uwindsor.ca](mailto:ydaniel@uwindsor.ca)), my faculty advisor, regarding the differences between Boys' and Girls' perceptions towards Health and Physical Education in a coeducational setting at the elementary school level. To assist me in acquiring the proper amount of data, I respectfully request your cooperation in conducting a survey of your students. It is hoped that through this survey, students can have a voice in determining the direction of future health and physical education programs. The insufficient amount of physical activity is a concern for all of us and the physical education program is the most appropriate one to investigate. The results are of value to our school board, teachers, coaches, and parents and will help us better prepare these students to become more aware of the importance of developing a long-lasting healthy and active lifestyle.

The study has been approved by the Research Ethics Board of The University of Windsor and XXXXXXXX, Superintendent of Education, of the XXXXXX. Your principal has also granted me permission to conduct the questionnaire at your school. Information received by your students will be held in the strictest of confidence and results will be made available at <http://www.uwindsor.ca/reb>. Students participating will not be asked to write their names on the questionnaire. Students will be free to withdraw from participation in this study at any time. There are no risks involved as the students will be responding to a multiple choice questionnaire and six short answer questions.

I also request permission to use your classroom and approximately 30 minutes of your instructional time, at a date to be determined later, to personally administer the questionnaire. You will be needed to distribute and collect parent/guardian permission forms.

Should you have any questions or concerns, please feel free to contact me at work (XXX-XXXX), at home (XXX-XXXX), or by BBS at XXXXXXX.



Thank you for taking the time to consider my request. I hope to hear from you soon so that I can carry out my investigation during the month of October, 2005.

Sincerely,

Paul Naim  
Teacher

APPENDIX G  
Parent/Guardian Consent Form



**CONSENT TO PARTICIPATE IN RESEARCH**

**Letter to Parent or Guardian**

**Title of Study: The relationship between gender and elementary school students' perceptions of Health and Physical Education in a coeducational setting.**

You are asked to allow permission for your child to participate in a research study conducted by Paul Naim, a student from the Faculty of Education at the University of Windsor and teacher with the XXXXXXXXXX District School Board. The results of the study will be used to complete the thesis requirements for a Master of Education degree. If you have any questions or concerns about the research, please feel to contact me at XXX-XXXX or by e-mail ([naim@uwindsor.ca](mailto:naim@uwindsor.ca)). If you like, you may also contact my faculty advisor, Dr. Yvette Daniel, University of Windsor at 253-3000 ext. 3824 or by e-mail ([ydaniel@uwindsor.ca](mailto:ydaniel@uwindsor.ca)) in regards to this study.

**PURPOSE OF THE STUDY**

The purpose of this study is to determine whether a relationship between gender and elementary school students' perceptions of Health and Physical Education in a coeducational setting exists.

**PROCEDURES**

If you allow your child to participate in this study, we would ask you to do the following things:

1. Sign the enclosed consent form and provide parental/guardian permission to participate.
2. On a specified day this month, the researcher will visit the classroom and administer the questionnaire. The researcher will go over all the rights of the students and review the questionnaire with all participants. Students will be given a student assent form to sign and date.
3. The students will be given approximately 30 minutes of class time to circle one of three choices: agree, undecided, or disagree, for 29 questions. Furthermore, the students will answer eight questions, six of which are short answer. This will allow the students to write down their feelings in their own words. Basic demographic information (grade and age only) will be requested. Pencils and erasers will be provided by the researcher.

**POTENTIAL RISKS AND DISCOMFORTS**

There are no known or anticipated risks involved in the proposed research.

### **POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

It is hoped that through this survey, students can have a voice in determining the direction of future health and physical education programs and meeting the ultimate goal of instilling healthy habits for life. The insufficient amount of physical activity is a concern for all of us and the physical education program is the most appropriate area to investigate. This study will also raise awareness regarding the differences among males and females with the hope of increasing the participation rate in physical activity for all youth.

### **PAYMENT FOR PARTICIPATION**

There will be no payment for participation in this study. It is strictly voluntary.

### **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. No names will be recorded on the survey or in the final report. Data received from the survey shall remain secured for 3 years and will be destroyed at that time.

### **PARTICIPATION AND WITHDRAWAL**

You can choose whether to allow your son/daughter to be in this study or not. If you give permission, you may make a request to withdraw your son/daughter at any time without consequences of any kind. The student may also refuse to answer any questions he/she does not want to answer and still remain in the study.

### **FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS**

Parents/Guardians and subjects will be able to read the results of this study by accessing the Research Ethics Board site ([www.uwindsor.ca/reb](http://www.uwindsor.ca/reb)) by January, 2006.

### **SUBSEQUENT USE OF DATA**

This data may be used in subsequent studies.

Do you give consent for the subsequent use of the data from this study?      Yes      No

### **RIGHTS OF RESEARCH SUBJECTS**

You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; telephone: 519-253-3000, ext. 3916; e-mail: lbunn@uwindsor.ca.

### **SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE**

I understand the information provided for the study entitled 'The relationship between gender and elementary school students' perceptions of Health and Physical Education in a coeducational setting' as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

\_\_\_\_\_  
Name of Subject

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

**SIGNATURE OF INVESTIGATOR**

These are the terms under which I will conduct research.

---

Signature of Investigator

---

Date

APPENDIX H  
Student Assent Form



Assent for Elementary School Children

Dear Student,

I am a teacher at a different school in XXXXXX and a student at The University of Windsor. I am doing a study on attitudes about physical education and would like to ask you to answer some really short questions. Some questions will ask you to write down your opinion about what you like and dislike about sports and physical education. When I am finished recording all the survey results from the students who agree to be in my study, I will write a report on what I have learned.

Your parents/guardians gave their permission for you to answer my questions on attitudes about physical education. If you decide to answer the questions, you can stop answering them at any time, and you don't have to answer any questions you don't want to. It's entirely up to you. You won't be graded on this survey and nobody, not even your teachers, coaches, friends or parents, will ever know what you have answered.

I understand what I am being asked to do to be in this study, and I agree to be in this study.

---

Name (Please Print)

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Signature

---

Date

---

Witness

## VITA AUCTORIS

NAME: Paul Jacob Naim

PLACE OF BIRTH: Windsor, Ontario, Canada

YEAR OF BIRTH: 1974

EDUCATION: University of Windsor, Windsor, Ontario  
1993-1998 B. Comm. (Honours)  
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